

Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment

Attachment 2

**From the USDI 2015 Record of Decision and Approved Resource Management Plan
Amendments for the Great Basin Region including the Greater Sage-Grouse Sub-Regions
of: Idaho and Southwestern Montana, Nevada and Northeastern California, Oregon, and
Utah**

Prepared by
US Department of the Interior
Bureau of Land Management
Nevada State Office

September 2015



MISSION STATEMENT

The BLM manages more than 245 million acres of public land, the most of any Federal agency. This land, known as the National System of Public Lands, is primarily located in 12 Western states, including Alaska.

The BLM also administers 700 million acres of sub-surface mineral estate throughout the nation. The BLM's mission is to manage and conserve the public lands for the use and enjoyment of present and future generations under our mandate of multiple-use and sustained yield. In Fiscal Year 2014, the BLM generated \$5.2 billion in receipts from public lands.

BLM/NV/NV/PL/15-14+1600

State Director Recommendation for Approval

We hereby recommend for approval the Nevada and Northeastern California Greater Sage-Grouse Resource Management Plan Amendment.



John F. Ruhs, Acting Nevada State Director

15 September 2015

Date



James G. Kenna, California State Director

9/15/2015

Date

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K	USFWS Biological Opinion
L	VDDT Methodology
M	Greater Sage-Grouse Noise Protocol
N	State of Nevada Conservation Credit System

ACRONYMS AND ABBREVIATIONS

Full Phrase

AML	appropriate management level
AMP	allotment management plan
APD	application for permit to drill
ARMPA	approved resource management plan amendment
ATV	all-terrain vehicle
AUM	animal unit month
BLM	United States Department of the Interior, Bureau of Land Management
BSU	biologically significant unit
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cm	centimeter
COA	conditions of approval
COT	Conservation Objectives Team
CSU	controlled surface use
DMP	disturbance management protocol
DOI	United States Department of the Interior
EIS	environmental impact statement
ESA	Endangered Species Act
ESD	ecological site description
FIAT	Wildfire and Invasive Annual Grasses Assessment Team
FLPMA	Federal Land Policy and Management Act
Forest Service	United States Department of Agriculture, Forest Service
GDP	geothermal drilling permit
GHMA	general habitat management area
GIS	geographic information system
GRSG	Greater Sage-Grouse
HMA	herd management area
IMPLAN	impact analysis for planning
IMT	Incident Management Team
JEDI	National Renewable Energy Laboratory's Jobs and Economic Development Impact model
LUPA	land use plan amendment
MOU	memorandum of understanding
NCA	National Conservation Area
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NHT	National Historic Trail
NRCS	Natural Resources Conservation Service
NSO	no surface occupancy
OHMA	other habitat management area
OHV	off-highway vehicle

ACRONYMS AND ABBREVIATIONS *(continued)*

Full Phrase

PACs	priority areas for conservation
PFC	proper functioning condition
PHMA	Priority habitat management area
PMU	population management units
RDFs	required design features
RFDS	reasonably foreseeable development scenario
RMP	resource management plan
ROD	record of decision
ROW	right-of-way (includes leases and permits)
S&G	standards and guidelines
SETT	Sagebrush Ecosystem Technical Team
SFA	sagebrush focal area
TL	timing limitation
TMA	travel management area
USC	United States Code
USDI	United States Department of Interior
USFWS	United States Fish and Wildlife Service
USGS	US Geological Survey
VDDT	vegetation dynamics development tool
VRM	visual resource management
WAFWA	Western Association of Fish and Wildlife Agencies
WO	Washington Office
WSA	Wilderness Study Area
WSR	Wild and Scenic River

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CHAPTER I

INTRODUCTION

The Federal Land Policy and Management Act of 1976 (FLPMA) directs the US Department of the Interior (DOI), Bureau of Land Management (BLM) to develop and periodically revise or amend its resource management plans (RMPs), which guide management of BLM-administered lands.

This Approved Resource Management Plan Amendment (ARMPA) is the result of the March 2010 US Fish and Wildlife Service (USFWS) 12-Month Finding for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered (75 *Federal Register* 13910, March 23, 2010; USFWS 2010a). In that finding, the USFWS concluded that the Greater Sage-Grouse (GRSG) was “warranted, but precluded” for listing as a threatened or endangered species.

The USFWS reviewed the status of and threats to the GRSG in relation to the five listing factors provided in Section 4(a)(1) of the Endangered Species Act (ESA). The USFWS determined that Factor A, “the present or threatened destruction, modification, or curtailment of the habitat or range of the GRSG,” and Factor D, “the inadequacy of existing regulatory mechanisms,” posed “a significant threat to the GRSG now and in the foreseeable future” (USFWS 2010a). The USFWS identified the principal regulatory mechanisms for the BLM as conservation measures in resource management plans (RMPs).

I.1 DESCRIPTION OF THE NEVADA AND NORTHEASTERN CALIFORNIA SUBREGIONAL PLANNING AREA

The ARMPA planning area boundary includes all lands regardless of jurisdiction (see **Figure I-1**, Nevada and Northeastern California Subregional Planning Area, Surface Management and Subsurface Estate, and **Figure I-2**, Nevada and Northern California Subregional Planning Area, Greater Sage-Grouse Habitat Management Areas Across All Jurisdictions). **Table I-1** outlines the number of surface acres that are administered by specific federal agencies, states, and local governments and lands that are privately owned in the planning area. It includes other BLM-administered lands that are not allocated as habitat management areas for GRSG. The ARMPAs do not establish any additional management for these lands, which will continue to be managed according to the existing, underlying land use plan for the areas.

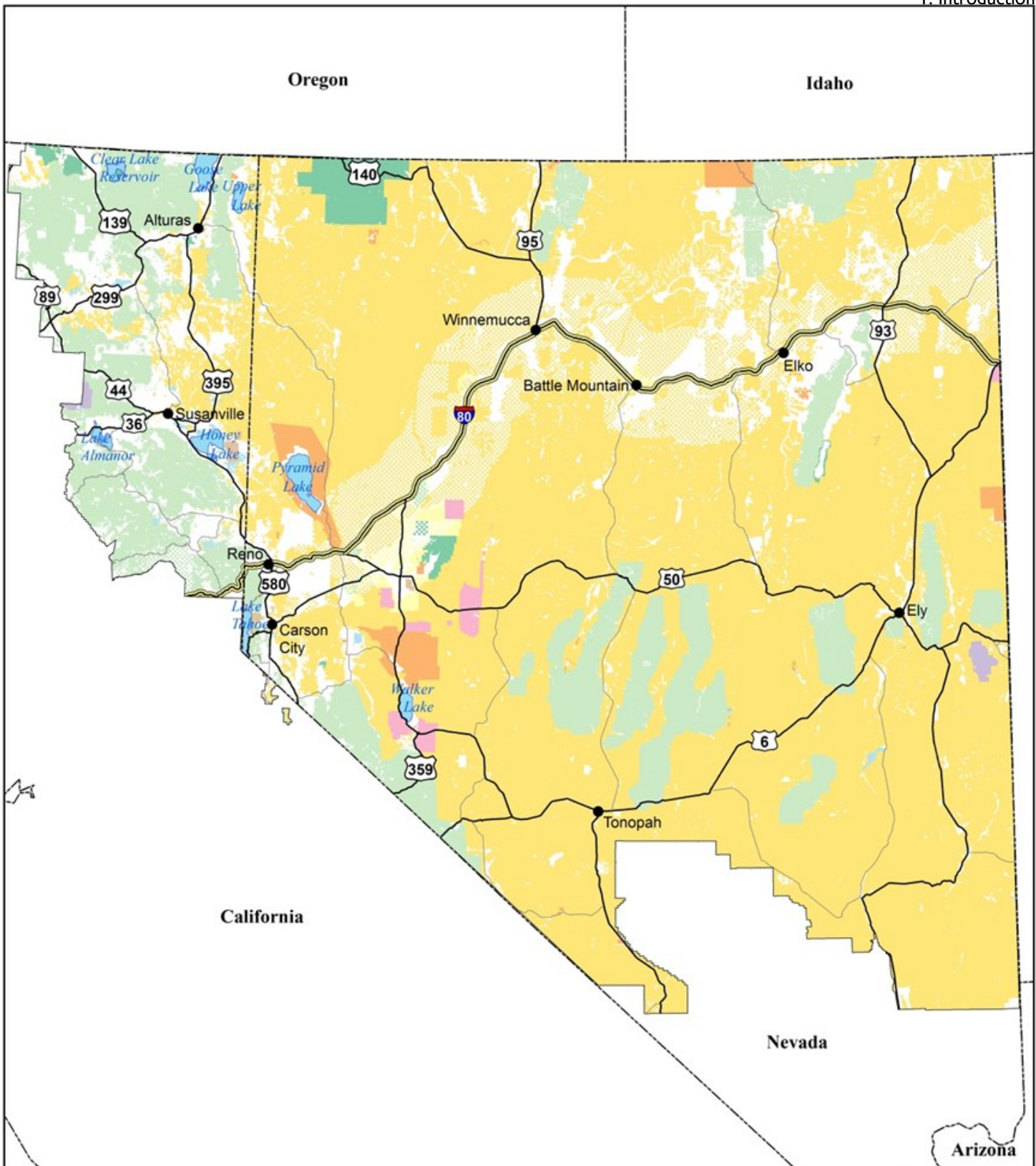
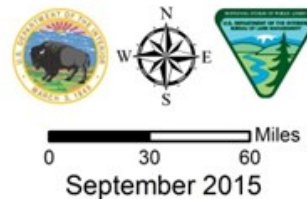
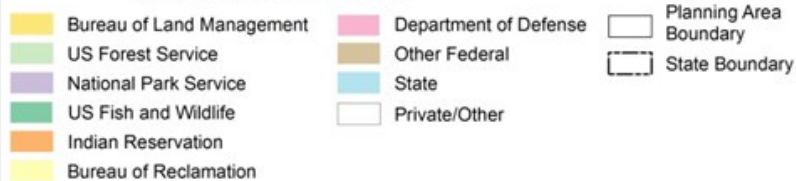


Figure 1-1: Nevada and Northeastern California Sub-Regional Planning Area, Surface Management and Sub-Surface Estate



No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



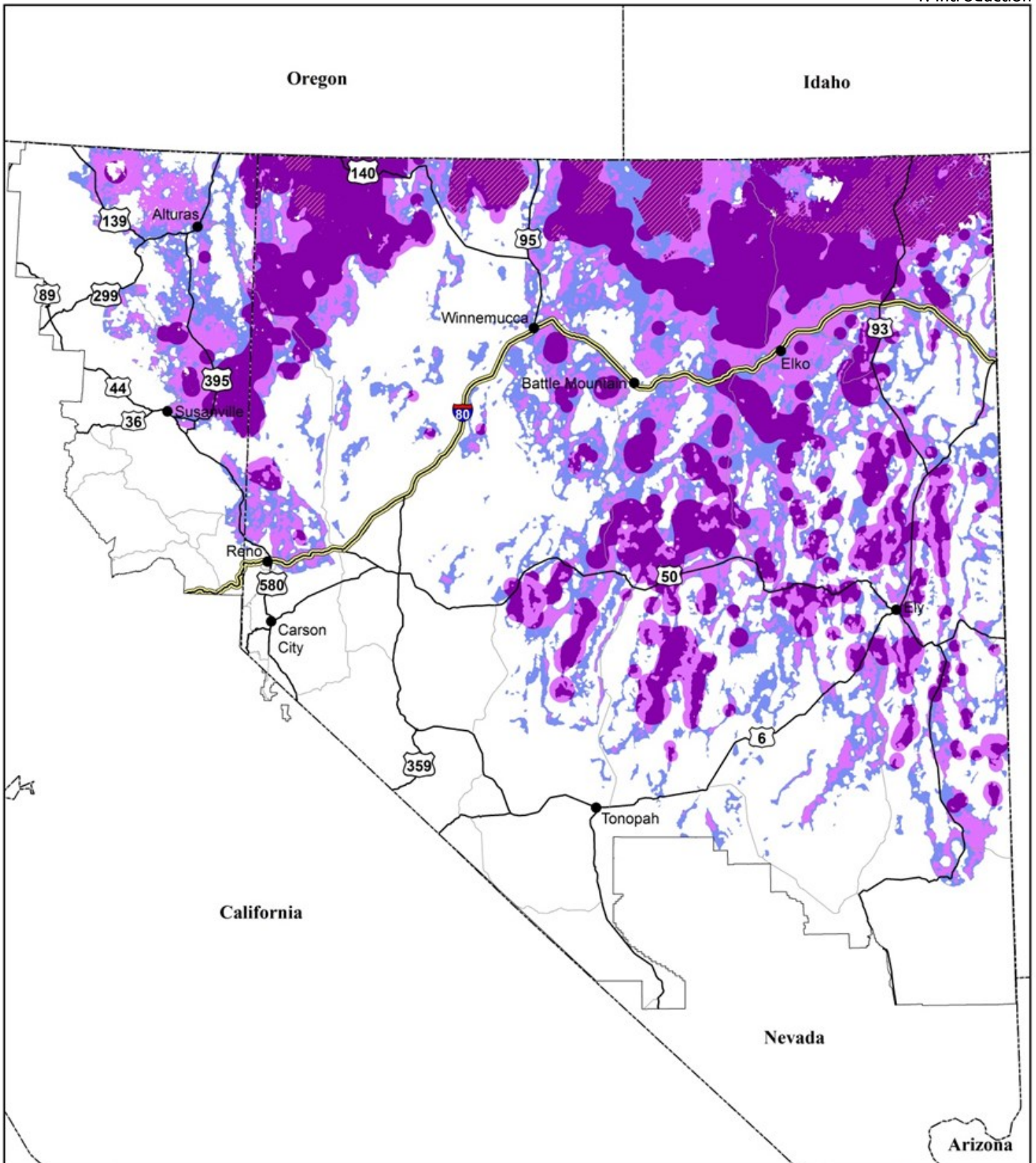
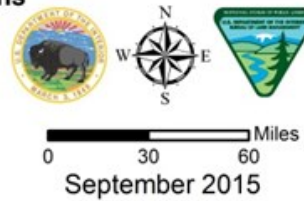


Figure 1-2: Nevada and Northern California Sub-Regional Planning Area, Greater Sage-Grouse Habitat Management Areas Across All Jurisdictions

- | | |
|---|--|
|  Sagebrush Focal Areas (SFAs) |  Other Habitat Management Areas (OHMAs) |
|  Priority Habitat Management Areas (PHMAs) |  Planning Area Boundary |
|  General Habitat Management Areas (GHMAs) |  State Boundary |



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Table I-1
Land Management in the Planning Area

Surface Land Management	Total Surface Land Management Acres
BLM	45,359,000
Forest Service	9,719,900
Private	11,857,800
Indian reservation	922,000
USFWS	805,900
Other	326,100
State	195,600
National Park Service	160,100
Other federal	3,200
Bureau of Reclamation	431,200
Local government	17,800
Department of Defense	402,000
Total acres	70,200,600

Source: BLM and Forest Service GIS 2013

The decision area for the ARMPA is BLM-administered lands in GRSG habitat management areas (see **Figure I-3**, Nevada and Northeastern California Decision Area, Greater Sage-Grouse Habitat Management Areas for BLM Administered Lands), including surface and split-estate Forest Service lands with BLM subsurface mineral rights. Any decisions in the ARMPA apply only to BLM-administered lands, including split-estate lands within GRSG habitat management areas (the decision area). These decisions are limited to providing land use planning direction that is specific to conserving GRSG and its habitat.

GRSG habitat on BLM-administered lands in the decision area consists of lands allocated as priority habitat management areas (PHMA), general habitat management areas (GHMA), and other habitat management areas (OHMA; see **Table I-2**).

Table I-2
Acres of PHMA, GHMA, and OHMA in the Decision Area for the ARMPA

	PHMA	GHMA	OHMA
BLM Administered Surface	9,309,700	5,720,600	5,876,600
BLM Administered Subsurface (Forest Service)	986,400	796,100	621,400

Source: BLM GIS 2015

PHMA, GHMA, and OHMA are defined as follows:

- **PHMA**—BLM-administered lands identified as having the highest value to maintaining sustainable GRSG populations. Areas of PHMA largely coincide with areas identified as priority areas for conservation in the USFWS's Conservation Objectives Team (COT) report. These areas include breeding, late brood-rearing, and winter concentration areas and migration or connectivity corridors.

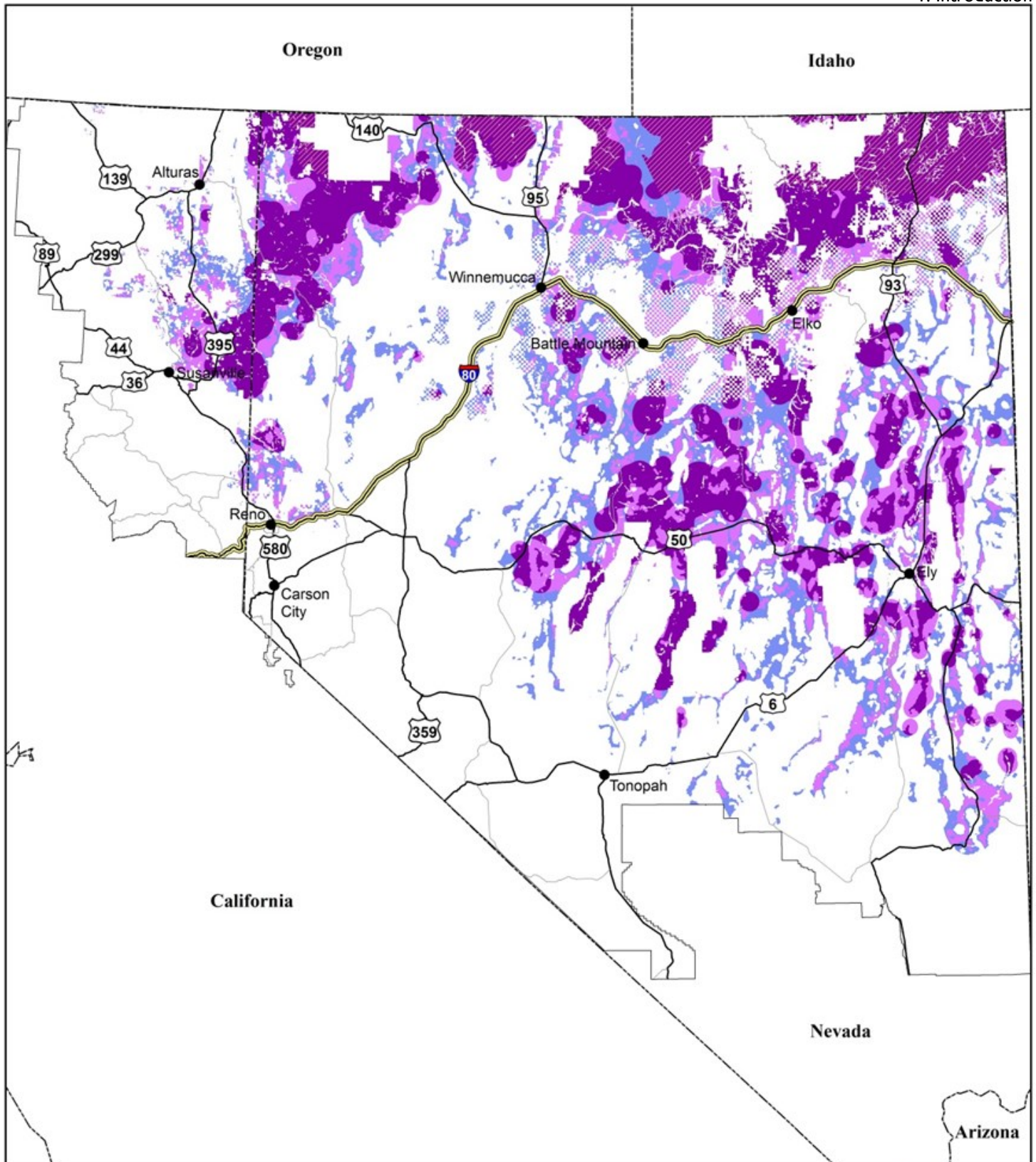


Figure 1-3: Nevada and Northeastern California Decision Area, Greater Sage-Grouse Habitat Management Areas for BLM Administered Lands

Legend

- | | |
|---|--|
| Sagebrush Focal Areas (SFAs) | Other Habitat Management Areas (OHMAs) |
| Priority Habitat Management Areas (PHMAs) | Planning Area Boundary |
| General Habitat Management Areas (GHMAs) | State Boundary |

No warranty is made by the Bureau of Land Management (BLM). The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.



- GHMA—BLM-administered lands where some special management will apply to sustain GRSG populations; these are areas of occupied seasonal or year-round habitat outside of PHMA.
- OHMA—BLM-administered lands identified as unmapped habitat in the Draft Land Use Plan Amendment (LUPA)/EIS that are within the planning area and contain seasonal or connectivity habitat areas. With the generation of updated modeling data (Spatially Explicit Modeling of Greater Sage-Grouse Habitat in Nevada and Northeastern California; Coates et al. 2014,) the areas containing characteristics of unmapped habitat were identified and are now referred to as OHMAs.

The ARMPA also identifies specific sagebrush focal areas (SFA), a subset of PHMA (see **Figure I-3**). SFA were derived from GRSG stronghold areas described by the USFWS in a memorandum to the BLM titled Greater Sage-Grouse: Additional Recommendations to Refine Land Use Allocations in Highly Important Landscapes (USFWS 2014). The memorandum and associated maps provided by the USFWS identify areas that represent recognized strongholds for GRSG that have been noted and referenced as having the highest densities of GRSG and other criteria important for the persistence of the species.

PHMA (including SFA), GHMA, and OHMA on BLM-administered lands in the decision area fall within 16 counties in northern Nevada and portions of five counties in northeastern California (see **Table I-3**). The habitat management areas also span across five BLM Nevada district offices, three BLM California field offices, and the portions of the Idaho BLM Jarbidge and Bruneau Field Offices that fall within the Nevada state line (see **Table I-4**).

The Battle Mountain, Carson City, Elko, Ely, and Winnemucca BLM District Offices in Nevada and the Alturas, Eagle Lake, and Surprise BLM Field Offices in California administer the 11 pertinent RMPs being amended by this ARMPA. The following BLM RMPs are hereby amended to incorporate appropriate GRSG conservation measures:

California RMPs

- Alturas RMP (BLM 2008a)
- Eagle Lake RMP (BLM 2008b)
- Surprise RMP (BLM 2008c)

Nevada RMPs

- Black Rock Desert-High Rock Canyon Emigrant Trails National Conservation Area RMP (BLM 2004a)
- Carson City Consolidated RMP (BLM 2001a)
- Elko RMP (BLM 1987a)
- Ely RMP (BLM 2008d)
- Winnemucca RMP (BLM 2015)
- Shoshone-Eureka RMP (BLM 1986a)
- Tonopah RMP (BLM 1997a)
- Wells RMP (BLM 1985a)

Table I-3
Acres of GRSG Habitat by County in the Decision Area (BLM-Administered Lands Only)¹

County Name ²	ARMPA			
	PHMA ³	GHMA	OHMA	TOTAL
Churchill	78,200	78,200	171,500	324,600
Elko	995,800	995,800	1,000,600	5,470,800
Eureka	531,300	531,300	371,000	1,540,400
Humboldt	661,600	661,600	715,400	2,507,300
Lander	612,500	612,500	591,300	1,989,500
Lassen	278,800	278,800	283,700	895,600
Lincoln	464,000	464,000	376,400	991,800
Lyon	600	600	1,400	2,000
Mineral	-	-	5,800	5,800
Modoc	93,400	93,400	64,800	215,100
Nye	266,800	266,800	770,700	1,354,400
Pershing	168,800	168,800	502,200	735,200
Plumas	-	-	1,800	1,800
Sierra	300	300	200	500
Storey	300	300	700	1,000
Washoe	466,500	466,500	305,700	2,060,700
White Pine	1,101,900	1,101,900	713,600	2,810,400
Grand Total	5,720,800	5,720,800	5,876,800	20,906,900

Source: BLM GIS 2015

¹ These figures do not include subsurface split-estate acreage.

² The following counties in the planning area do not contain mapped GRSG habitat: Carson City, Douglas, Esmeralda, and Siskiyou.

³ PHMA acres in the proposed plan include 2,797,400 acres in Elko, Humboldt, and Washoe Counties associated with SFA.

Table I-4
Acres of GRSG Habitat by BLM District/Field Office in the Decision Area (BLM-Administered Lands Only)¹

BLM Office	ARMPA			
	PHMA ²	GHMA	OHMA	TOTAL
Alturas Field Office ³	12,200	127,700	178,000	317,900
Battle Mountain District Office	1,549,600	1,014,300	1,163,600	3,727,500
Carson City District Office	115,000	231,100	309,400	655,500
Eagle Lake Field Office	474,300	242,800	147,700	864,800
Elko District Office	3,586,900	1,203,600	1,152,500	5,943,000
Ely District Office	1,176,000	1,741,800	1,486,200	4,404,000
Jarbridge Field Office ⁴	32,700	10,000	900	43,600
Bruneau Field Office ⁴	7,700	0	300	8,000
Surprise Field Office	862,500	215,400	100,400	1,178,300

Table I-4
Acres of GRSG Habitat by BLM District/Field Office in the Decision Area (BLM-Administered Lands Only)¹

BLM Office	ARMPA			
	PHMA ²	GHMA	OHMA	TOTAL
Winnemucca District Office	1,492,800	933,900	1,337,600	3,764,300
Total Acres	9,309,700	5,720,600	5,876,600	20,906,900

Source: BLM GIS 2015

¹These figures do not include subsurface split-estate acreage.

²Includes 2,797,400 acres of SFA in the Surprise Field Office, Winnemucca District Office, and Elko District Office.

³The Alturas Field Office has recently been renamed the Applegate Field Office.

⁴Only that part of the Idaho BLM Jarbidge and Bruneau Field Offices that falls in the Nevada state line.

I.2 PURPOSE AND NEED

The BLM has prepared this ARMPA with an associated EIS to amend RMPs for field offices/district offices containing GRSG habitat. This planning process is needed to respond to the USFWS's March 2010 "warranted, but precluded" ESA listing petition decision for GRSG. The USFWS identified (1) the present or threatened destruction, modification, or curtailment of habitat or range and (2) the inadequacy of existing regulatory mechanisms as significant threats. The agency also identified the principal regulatory mechanisms for the BLM as conservation measures incorporated into land use plans.

The purpose of the ARMPA is to identify and incorporate appropriate measures in existing land use plans. It is intended to conserve, enhance, and restore GRSG habitat by avoiding, minimizing, or compensating for unavoidable impacts on GRSG habitat in the context of the BLM's multiple use and sustained yield mission under FLPMA. Changes in management of GRSG habitats are necessary to avoid the continued decline of populations across the species' range. This ARMPA focuses on areas affected by threats to GRSG habitat identified by the USFWS in the March 2010 listing decision and in the USFWS 2013 COT report.

The BLM interdisciplinary team, in coordination with the USFWS on BLM-administered lands in the Nevada and northeastern California subregion, identified the following major threats to GRSG or its habitat:

- Wildfire—Loss of large areas due to wildfire
- Invasive species—Conversion to cheatgrass-dominated plant communities
- Conifer invasion—Encroachment of pinyon or juniper
- Infrastructure—Fragmentation due to development, such as rights-of-way (ROWs) and renewable energy development
- Grazing—Loss of habitat components due to improper livestock grazing
- Wild horses and burros—Loss of habitat components due to excessive grazing
- Hard rock mining—Fragmentation due to exploration and development
- Fluid mineral development—Fragmentation due to exploration and development

- Human uses—fragmentation of habitat or modification of behavior due to human presence and activities
- Climate change—Fragmentation due to climate stress

Because the BLM administers a large portion of GRSG habitat in the affected states, changes in GRSG habitat management are anticipated to have a considerable beneficial impact on present and future GRSG populations.

I.3 NEVADA AND NORTHEASTERN CALIFORNIA SUBREGIONAL GRSG CONSERVATION SUMMARY

This ARMPA identifies and incorporates measures to conserve, enhance, and restore GRSG habitat by avoiding, minimizing, and compensating for unavoidable impacts of threats. The ARMPA addresses threats identified by the GRSG National Technical Team (NTT), by the USFWS in the March 2010 listing decision, and those described in the USFWS's COT report. In accordance with the report, the USFWS identified threats to GRSG population across the range and stated whether that threat is present and widespread, present but localized, or unknown for that specific population. **Table I-5** identifies the GRSG populations and the threats identified by the COT within the Nevada and California subregion.

Table I-5
Threats¹ to GRSG in the Nevada and Northeastern California Subregion, as Identified by the COT (2013)

GRSG Identified Populations from the COT Report Applicable to the Nevada/NE California Subregion	Unit Number	Isolated Small Size	Sagebrush Elimination	Agriculture Conversion	Fire	Conifers	Weeds/Annual Grasses	Energy	Mining	Infrastructure	Grazing	Free-Roaming Equids	Recreation	Urbanization
N. Great Basin (Oregon, Idaho, Nevada)	26a		L	L	Y	Y	Y	L	L	Y	Y	L	Y	Y
W. Great Basin (Oregon, California, Nevada)	31		L	L	Y	Y	Y	L	L	L	Y	Y	U	
Klamath (California)	29	Y	U	U	Y	Y	Y	L		U	U	U	U	U
Northwest Interior (Nevada)	14	Y			Y		Y	U	Y	Y	Y	Y	Y	
Southern Great Basin (Nevada)	15c	L	L	L	Y	Y	Y	L	L	Y	Y	Y	Y	
Quinn Canyon Range (Nevada)	16	Y			Y	Y	Y			Y	Y	Y	Y	
Warm Springs Valley (Nevada)	30	Y		Y	Y	Y	Y	Y		Y	Y	Y	Y	Y

¹ Threats are characterized as follows: Y = threat is present and widespread, L = threat present but localized, and U = unknown.

Table I-6 provides a crosswalk as to how the ARMPA for the Nevada and California subregion addresses the threats from the COT report.

Table I-6
Key Components of the Nevada and Northeastern California GRSG ARMPA Addressing COT Report Threats

Threats to GRSG and Its Habitat (from COT Report)	Key Component of the Nevada and Northeastern California ARMPA
All threats	• Implement the adaptive management plan, which allows for more restrictive land use allocations and management actions to be implemented if habitat or population hard triggers are met. • Require and ensure mitigation that provides a net conservation gain to GRSG. • Monitor implementation and effectiveness of conservation measures in GRSG habitats according to the habitat assessment framework.
All development threats, including mining, infrastructure, and energy development	• PHMA—Implement the disturbance management protocol (DMP) in Nevada. It provides an anthropogenic (human) disturbance cap of 3% within the biologically significant unit (BSU; see Appendix A and Figure 2-2) and proposed project analysis areas in PHMA, except in situations where a biological analysis indicates a net conservation gain to the species. In California, the 3% disturbance cap applies without exceptions. • Apply necessary buffers based on project type and location to address impacts on leks when authorizing actions in GRSG habitat. • Apply required design features (RDFs) when authorizing actions that affect GRSG habitat. • Minimize the effects of infrastructure projects, including siting, using the best available science, updated as monitoring information on current infrastructure projects becomes available.
Energy development—fluid minerals, including geothermal resources	• PHMA—Open to fluid mineral leasing subject to no surface occupancy (NSO) stipulation without waiver or modification and with limited exception. In SFA, NSO without waiver, modification, or exception. • GHMA—Open to fluid mineral leasing subject to controlled surface use (CSU) and timing limitation (TL) stipulations. • Prioritize the leasing and development of fluid mineral resources outside GRSG habitat.
Energy development—wind energy	• PHMA—Exclusion area (not available for wind energy development under any conditions) • GHMA—Avoidance area (may be available for wind energy development with special stipulations)
Energy development—solar energy	• PHMA—Exclusion area (not available for solar energy development under any conditions) • GHMA—Exclusion area (not available for solar energy development under any conditions)

Table I-6
Key Components of the Nevada and Northeastern California GRSG ARMPA Addressing
COT Report Threats

Threats to GRSG and Its Habitat (from COT Report)	Key Component of the Nevada and Northeastern California ARMPA
Infrastructure—major ROWs	• PHMA—Avoidance area (may be available for major ROWs with special stipulations) • GHMA—Avoidance area (may be available for major ROWs with special stipulations)
Infrastructure—minor ROWs	• PHMA—Avoidance area (may be available for minor ROWs with special stipulations)
Mining—locatable minerals	• SFA—Recommend withdrawal from the Mining Law of 1872
Mining—nonenergy leasable minerals	• PHMA—Closed area (not available for nonenergy leasable minerals)
Mining—salable minerals	• PHMA—Closed area (not available for salable minerals) with a limited exception (may remain open to free use permits and expansion of existing active pits if criteria are met)
Mining—coal	• <i>Not applicable in the Nevada and Northeastern California subregional planning area.</i>
Improper livestock grazing	• Prioritize the review and processing of grazing permits/leases in SFA followed by PHMA. • Include in NEPA analyses for renewals and modifications of grazing permits/leases specific management thresholds, based on the GRSG habitat objectives table, land health standards, and ecological site potential, to allow adjustments to grazing that have already been subjected to NEPA analysis. • Prioritize field checks in SFA followed by PHMA to ensure compliance with the terms and conditions of grazing permits.
Free-roaming equid (wild horses and burros) management	• Manage herd management areas (HMAs) in GRSG habitat within established appropriate management level (AML) ranges to achieve and maintain GRSG habitat objectives. • Prioritize rangeland health assessment, gathers and population growth suppression techniques, monitoring, and review and adjustment of AMLs and preparation of HMA plans in GRSG habitat.
Range management structures	• Allow range improvements that do not impact GRSG or that provide a conservation benefit to GRSG, such as fences for protecting important seasonal habitats. • Remove livestock ponds built in perennial channels that are negatively impacting riparian habitats. Do not permit new ones to be built in these areas, subject to valid existing rights.
Recreation	• PHMA—Do not construct new recreation facilities. • Allow special recreation permits only if their effects on GRSG and its habitat are neutral or if they would result in a net conservation gain.

Table I-6
Key Components of the Nevada and Northeastern California GRSG ARMPA Addressing COT Report Threats

Threats to GRSG and Its Habitat (from COT Report)	Key Component of the Nevada and Northeastern California ARMPA
Fire	- Identify and prioritize areas that are vulnerable to wildfires and prescribe actions important for GRSG protection. - Protect GRSG habitat with the highest consideration, along with other high values, when positioning resources (Forest Service only). - Prioritize post-fire treatments in PHMA and GHMA.
Nonnative, invasive plant species	- Improve GRSG habitat by treating annual grasses. - Treat sites in PHMA and GHMA that contain invasive species infestations through an integrated pest management approach.
Sagebrush removal	- PHMA—Maintain all lands ecologically capable of producing sagebrush (but no less than 70%) with a minimum of 15% sagebrush cover or as consistent with specific ecological site conditions. - Ensure that all BLM use authorizations contain terms and conditions regarding the actions needed to meet or progress toward meeting the habitat objectives for GRSG.
Pinyon and juniper expansion	Remove conifers encroaching into sagebrush habitats, in a manner that considers tribal cultural values, prioritizing occupied GRSG habitat.
Agricultural conversion and exurban development	Retain GRSG habitat in federal management unless a land disposal would result in a net conservation gain for GRSG or would have no direct or indirect adverse impact on the conservation of the GRSG.

The ARMPA also identifies and incorporates measures for other uses and resources that are designed to enhance and restore GRSG habitat. Specifically, the ARMPA requires the following management decisions, subject to valid existing rights:

- Providing a framework for prioritizing areas in PHMA and GHMA for wildfire, invasive annual grass, and conifer treatments
- Requiring specific design features for certain land and realty uses
- Implementing the disturbance management protocol
- Including GRSG habitat objectives in land health standards, as appropriate
- Adjusting grazing practices as necessary, based on GRSG habitat objectives, land health standards, and ecological site potential

The ARMPA also establishes screening criteria and conditions for new anthropogenic activities in PHMA and GHMA to ensure a net conservation gain to GRSG. The ARMPA will reduce habitat disturbance and fragmentation by limiting surface-disturbing activities, while addressing changes in resource condition and use through monitoring and adaptive management.

The ARMPA adopts key elements of the State of Nevada Greater Sage-Grouse Conservation Plan (State of Nevada 2014) and the State of Nevada Conservation Credit System (Nevada Natural Heritage Program and Sagebrush Ecosystem Technical Team 2014) by establishing conservation measures and focusing restoration in the same key areas most valuable to the GRSG, including SFA.

For a full description of the BLM's ARMPA, see **Section 2**.

I.4 PLANNING CRITERIA

Planning criteria are based on appropriate laws, regulations, BLM manual and handbook sections, and policy directives. Criteria are also based on public participation and coordination with cooperating agencies, other federal agencies, state and local governments, and Native American tribes. Planning criteria are the standards, rules, and factors used as a framework to resolve issues and develop alternatives. They are prepared to ensure decision-making is tailored to the issues and to ensure that the BLM avoid unnecessary data collection and analysis. Preliminary planning criteria were included in the Draft RMPA/Draft EIS and were further refined for the Proposed RMPA/Final EIS.

Planning criteria carried forward for this ARMPA are as follows:

- The BLM used the Western Association of Fish and Wildlife Agencies (WAFWA) Conservation Assessment of GRSG and Sagebrush Habitats (Connelly et al. 2004; Coates and D. J. Delehanty 2004, 2008, 2010) and any other appropriate resources to identify GRSG habitat requirements and required design features.
- The ARMPA is consistent with the BLM's 2011 National GRSG Conservation Strategy.
- The ARMPA complies with BLM direction, such as FLPMA, NEPA, and Council on Environmental Quality (CEQ) regulations at 40 CFR, Parts 1500-1508; DOI regulations at 43 CFR, Parts 4 and 1600; the BLM H-1601-1 Land Use Planning Handbook, "Appendix C: Program-Specific and Resource-Specific Decision Guidance Requirements" for affected resource programs (BLM 2005a); the 2008 BLM NEPA Handbook (H-1790-1; BLM 2008e); and all other applicable BLM policies and guidance.
- The ARMPA is limited to providing direction specific to conserving GRSG species and habitats.
- The BLM considered land allocations and prescriptive standards to conserve GRSG and its habitat, as well as objectives and management actions to restore, enhance, and improve GRSG habitat.
- The ARMPA recognizes valid existing rights.
- The ARMPA addresses BLM-administered land in GRSG habitats, including surface and split-estate lands with BLM subsurface mineral rights. Any decisions in the ARMPA apply only to BLM-administered lands.
- The BLM used a collaborative and multi-jurisdictional approach, where appropriate, to determine the desired future condition of BLM-administered lands for conserving GRSG and their habitats.
- As described by law and policy, the BLM ensured that conservation measures are as consistent as possible with other planning jurisdictions within the planning area boundaries.

- The BLM considered a range of reasonable alternatives, including appropriate management prescriptions that focus on the relative values of resources, while contributing to the conservation of GRSG and its habitat.
- The BLM addressed socioeconomic impacts of the alternatives and updated socioeconomic analysis for the Proposed RMPA/Final EIS. Socioeconomic analysis used such tools as the input-output quantitative models IMPLAN and the National Renewable Energy Laboratory's Jobs and Economic Development Impact model (JEDI) for renewable energy analysis, where quantitative data is available.
- The BLM used the best available scientific information, research, technologies, and results of inventory, monitoring, and coordination to inform appropriate local and regional management strategies that will enhance or restore GRSG habitats.
- The ARMPA is consistent with the objectives in BLM Manual 6840, which are to preserve the ecosystem on which species depend and to initiate proactive conservation measures that minimize the possibility of listing the species under the ESA.
- Management of GRSG habitat that intersects with designated Wilderness Areas on BLM-administered lands is guided by BLM Manual 6340 Management of Designated Wilderness Areas (BLM 2012b). Land use allocations made for GRSG are consistent with BLM Manual 6340 and other laws, regulations, and policies related to wilderness area management.
- Management of GRSG habitat that intersects with National Conservation Areas (NCAs) on BLM-administered lands is guided by BLM Manual 6220, Management of National Conservation Areas (BLM 2012c). Land use allocations made for GRSG are consistent with BLM Manual 6220 and other laws, regulations, and policies related to NCA management.
- Management of GRSG habitat that intersects with eligible, suitable, or designated Wild and Scenic Rivers (WSR) are guided by BLM Manual 6400, Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, Planning, and Management (BLM 2012d). Land use allocations made for GRSG are consistent with BLM Manual 6400 and other laws, regulations, and policies related to WSR management.
- Management of GRSG habitat that intersects with National Historic Trails (NHT) or trails under study for possible designation (study trails) are guided by BLM Manual 6280, Management of National Scenic and Historic Trails and Trails Under Study or Recommended as Suitable for Congressional Designation (BLM 2012e). Land use allocations made for GRSG are consistent with BLM Manual 6280 and other laws, regulations, and policies related to NHT management.
- Management of GRSG habitat that intersects with Lands with Wilderness Characteristics on BLM-administered lands are guided by BLM Manuals 6310 and 6320, Conducting Wilderness Characteristics Inventory on BLM Lands and Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process (BLM 2012f, 2012g). Land use allocations made for GRSG are consistent with BLM Manuals 6310 and 6320 and other laws, regulations, and policies related to Lands with Wilderness Characteristics management.
- Management of GRSG habitat that intersects with Wilderness Study Areas (WSAs) on BLM-administered lands are guided by Manual 6330, Management of Wilderness Study Areas.

Land use allocations made for WSAs are consistent with Manual 6330 and with other laws, regulations, and policies related to WSA management.

- For BLM-administered lands, all activities and uses in GRSG habitats have followed existing land health standards. Standards and guidelines (S&G) for livestock grazing and other programs that have developed S&Gs are applicable to all alternatives for BLM-administered lands. For National Forest System lands, all activities in GRSG habitat will achieve the GRSG habitat objectives.
- The BLM has consulted with Native American tribes to identify sites, areas, and objects important to their cultural and religious heritage in GRSG habitats.
- The BLM has coordinated and communicated with state, local, and tribal governments to ensure that the BLM considered providing pertinent plans, sought to resolve inconsistencies between state, local, and tribal plans, and provided ample opportunities for state, local, and tribal governments to comment on the development of amendments.
- The ARMPA has incorporated the principles of adaptive management.
- Reasonably foreseeable development (RFD) scenarios and planning for fluid minerals follow the BLM Handbook H-1624-1 and current fluid minerals manual guidance (oil and gas, coal-bed methane, oil shale) and geothermal resources [BLM 1990a]).
- Data used in developing the ARMPA are consistent with the principles of the Information Quality Act of 2000 (Public Law [PL] 106-554, Section 515); state data was used as the basis for PHMA and GHMA identification.
- State fish and wildlife agencies' GRSG data and expertise have been considered in making management determinations on BLM-administered lands.
- Where more restrictive land use allocations or decisions are made in existing RMPs, those more restrictive land use allocations or decisions will remain in effect and will not be amended by this ARMPA.

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CHAPTER 2

APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT

2.1 APPROVED RESOURCE MANAGEMENT PLAN AMENDMENT INSTRUCTIONS

This ARMPA is now the baseline plan for management for Greater Sage-Grouse in northeastern California and Nevada in the following District Offices: Battle Mountain, Carson City, Elko, Ely, and Winnemucca in Nevada, and the Northern California District in California. The ARMPA adopts the management described in the Nevada and Northeastern California Greater Sage-Grouse Proposed Resource Management Plan Amendment and Final Environmental Impact Statement (2015), with modifications and clarifications as described in the *Modifications and Clarifications* section of the ROD.

In the event there are inconsistencies or discrepancies between previously approved RMPs and this ARMPA, the decisions contained in this ARMPA will be followed, unless there are more restrictive decisions in the existing plans, which will be implemented. The BLM will continue to tier to statewide, national, and programmatic EISs and other NEPA and planning documents. The agency will consider and apply required design features or other management protocols contained in other planning documents after appropriate site-specific analysis.

All future resource authorizations and actions in GRSG habitat will conform to, or be consistent with, the decisions contained in this ARMPA. All existing operations and activities authorized under permits, contracts, cooperative agreements, or other authorizations will be modified, as necessary and appropriate, to conform to this plan amendment within a reasonable time frame. However, this ARMPA does not repeal valid existing rights on public lands. A valid existing right is a claim or authorization that takes precedence over the decisions developed in this plan. If such authorizations come up for review and can be modified, they will also be brought into conformance with this plan amendment if appropriate.

While the Final EIS for the Nevada/NE California Proposed GRSG RMP Amendment constitutes compliance with NEPA for the broad-scale decisions made in this ARMPA, the BLM will continue to prepare environmental assessments (EAs) and environmental impacts statements (EISs) where appropriate as part of implementation level planning and decision-making.

2.2 GOALS, OBJECTIVES, AND MANAGEMENT DECISIONS

This section of the ARMPA presents the goals, objectives, land use allocations, and management actions established for protecting and preserving GRSg and its habitat on BLM-administered lands in Nevada and northeastern California. These management decisions are presented by program area, and not all types of decisions were identified for each program. A monitoring framework is also included in **Appendix D** to describe how the program decisions will be monitored to ensure implementation.

This section is organized by program area, beginning with the special status species program, which identifies specific goals, objectives, and management actions for GRSg and its habitat. For ease of identification into the future, each program area has identified abbreviations (see below) for these program areas, and each decision in that program is numbered in coordination with the abbreviation:

- Special Status Species (**SSS**)
 - Greater Sage-Grouse
 - Disease
 - Predation
 - Adaptive Management
- Vegetation (**VEG**)
 - Sagebrush Steppe
 - Conifer Encroachment
 - Invasive Species
 - Riparian and Wetlands
- Fire and Fuels Management (**FIRE**)
 - Pre-Suppression
 - Suppression
 - Fuels Management
 - Post-Fire Management
- Livestock Grazing (**LG**)
- Wild Horses and Burros (**WHB**)
- Minerals Resources (**MR**)
 - Fluid Minerals
 - Locatable Minerals
 - Salable Minerals
 - Nonenergy Leasable Minerals
 - Mineral Split-Estate
- Renewable Energy (Wind and Solar; **RE**)

- Lands and Realty (**LR**)
 - Utility Corridors and Communication Sites
 - Land Use Authorizations
 - Land Tenure
 - Recommended Withdrawals
- Recreation and Visitor Services (**REC**)
- Travel and Transportation (**TTM**)
- Cultural Resources (**CUL**)
- Mitigation (**MT**)

Table 2-1 is a summary of the allocation decisions presented for each GRSG habitat management area.

Table 2-1
Summary of Allocation Decisions by GRSG Habitat Management Areas

Resource	PHMA	GHMA	OHMA
Land tenure	Retain	Retain	Retain/dispose
Solar	Exclusion	Exclusion	Exclusion
Wind	Exclusion	Avoidance	Open
Major ROWs	Avoidance	Avoidance	Open
Minor ROWs	Avoidance	Open	Open
Oil and gas	Open with major stipulations	Open with minor stipulations	Open with standard stipulations
Geothermal	Open with major stipulations	Open with minor stipulations	Open with standard stipulations
Nonenergy leasables	Closed	Open	Open
Salable minerals	Closed	Open	Open
Locatable minerals	SFA = recommend withdrawal Other PHMA = open	Open	Open
Travel management	Limited	Limited	Open
Livestock grazing	Open	Open	Open

2.2.1 Special Status Species (SSS)

Goal SSS 1: *Conserve, enhance, and restore the sagebrush ecosystem upon which GRSG populations depend in an effort to maintain and/or increase their abundance and distribution, in cooperation with other conservation partners.*

Objective SSS 1: Manage land resource uses to meet GRSG habitat objectives, as described in **Table 2-2**. The habitat objectives will be used to evaluate management actions that are proposed in GRSG habitat. Managing for habitat objectives will ensure that habitat conditions are maintained if they are currently meeting objectives or if habitat conditions move toward these objectives in the event that current conditions do not meet these objectives.

Table 2-2
Habitat Objectives for GRSG

Attribute	Indicators	Desired Condition (Habitat Objectives)	Reference
GENERAL/LANDSCAPE-LEVEL¹			
All life stages	Rangeland health assessments	Meeting all standards ²	
Cover (nesting)	Seasonal habitat needed	>65% of the landscape in sagebrush cover	Aldridge and Boyce 2007
	Annual grasses	<5%	Blomberg et al. 2012
Security (nesting)	Conifer encroachment	<3% phase I (>0 to <25% cover) No phase II (25 to 50% cover) No phase III (>50% cover)	Casazza et al. 2011 USGS (in prep A)
Cover and food (winter)	Conifer encroachment	<5% phase I (>0 to <25% cover) No phase II (25 to 50% cover) No phase III (>50%)	USGS (in prep A) USGS (in prep B)
	Sagebrush extent	>85% sagebrush land cover	USGS (in prep A) Doherty et al. 2008
LEK (Seasonal Use Period: March 1 to May 15)¹			
Cover	Availability of sagebrush cover	Has adjacent sagebrush cover	Blomberg et al. 2012 Connelly et al. 2000 Stiver et al. 2015 (in press) HAF
Security ³	Pinyon or juniper cover	<3% landscape cover within .6 mile of leks	Connelly et al. 2000 (modified) Stiver et al. 2015 (in press) HAF
	Proximity of tall structures ⁴	Use Manier et al. 2014- Conservation Buffer Distance Estimates for GRSG-A Review; preference is 3 miles	Baruch-Mordo et al. 2013 Coates et al. 2013 Manier et al. 2014
NESTING (Seasonal Use Period: April 1 to June 30)¹			
Cover	Sagebrush cover	≥20%	Kolada et al. 2009a, 2009b
	Residual and live perennial grass cover (such as native bunchgrasses)	≥10% if shrub cover is <25% ⁵	Coates et al. 2013 Coates and Delehanty 2010 Kolada et al. 2009a, 2009b
	Annual grass cover	<5%	Lockyer et al. (in press)
	Total shrub cover	≥30%	Coates and Delehanty 2010 Kolada et al. 2009a Lockyer et al. (in press)
	Perennial grass height (includes residual grasses)	Provide overhead and lateral concealment from predators	Connelly et al. 2000, 2003 Hagen et al. 2007; Stiver et al. 2015 (in press) HAF
Security ²	Proximity of tall structures ⁴ (3 feet [1 meter] above shrub)	Use Manier et al. 2014, Conservation Buffer Distance Estimates for GRSG-A Review; preference is 3 miles	Coates et al. 2013 Gibson et al. 2013 Manier et al. 2014

Table 2-2
Habitat Objectives for GRSG

Attribute	Indicators	Desired Condition (Habitat Objectives)	Reference
BROOD-REARING/SUMMER (Seasonal Use Period: May 15 to September 15; Early: May 15 to June 15; Late: June 15 to September 15) ¹			
UPLAND HABITATS			
Cover	Sagebrush cover	10 to 25%	Connelly et al. 2000
	Perennial grass cover and forbs	>15% combined perennial grass and forb cover	Connelly et al. 2000 Hagen et al. 2007
	Deep rooted perennial bunchgrass (within 522 feet [200 meters] of riparian areas and wet meadows)	7 inches ^{6,7}	Hagen et al. 2007 Casazza et al. 2011
Cover and food	Perennial forb cover	≥5% arid ≥15% mesic	Casazza et al. 2011 Lockyer et al. (in press)
RIPARIAN/MEADOW HABITATS			
Cover and food	Riparian areas/meadows	PFC	Dickard et al. 2014 Prichard et al. 1998, 1999 Stiver et al. 2015 (in press) HAF
Security	Upland and riparian perennial forb availability and understory species richness	- Preferred forbs are common with several species present⁶ - High species richness (all plants)	Stiver et al. 2015 (in press) HAF
	Riparian area/meadow interspersions with adjacent sagebrush	Has adjacent sagebrush cover	Casazza et al. 2011 Stiver et al. 2015 (in press) HAF
WINTER (Seasonal Use Period: November 1 to February 28) ¹			
Cover and Food	Sagebrush cover	≥10% above snow depth	Connelly et al. 2000 USGS (in prep C)
	Sagebrush height	>9.8 inches above snow depth	Connelly et al. 2000 USGS (in prep C)

¹Any one single habitat indicator does not define whether the habitat objective is or is not met. Instead, the preponderance of evidence from all indicators within that seasonal habitat period must be considered when assessing sage-grouse habitat objectives.

²Upland standards are based on indicators for cover, including litter, live vegetation, and rock, appropriate to the ecological potential of the site.

³Applicable to Phase I and Phase II pinyon and/or juniper.

⁴Does not include fences.

⁵In addition, if upland rangeland health standards are being met.

⁶Relative to ecological site potential.

⁷In drought years, 4-inch perennial bunchgrass height with greater than 20 percent measurements exceeding 5 inches in dry years.

The habitat objectives in **Table 2-2** summarize the characteristics that research has found represent the seasonal habitat needs for GRSG. The specific seasonal components identified in the Table were adjusted based on local science and monitoring data to define the range of characteristics used in this subregion. Thus, the habitat objectives provide the broad vegetative conditions we strive to obtain across the landscape that indicate the seasonal habitats used by GRSG. These habitat indicators are consistent with the rangeland health indicators used by the BLM.

The habitat objectives will be part of the GRSg habitat assessment to be used during land health evaluations (see **Appendix D**). These habitat objectives are not obtainable on every acre within the designated GRSg habitat management areas. Therefore, the determination on whether the objectives have been met will be based on the specific site's ecological ability to meet the desired condition identified in the Table.

All BLM use authorizations will contain terms and conditions regarding the actions needed to meet or progress toward meeting the habitat objectives. If monitoring data show the habitat objectives have not been met nor progress being made towards meeting them, there will be an evaluation as to the cause of not meeting objectives. If it is found that the authorized use is a significant factor, the use will be adjusted by the response specified in the instrument that authorized the use (Stiver et. al 2015, in press).

Objective SSS 2: Maintain or improve connectivity between, to, and in PHMAs and GHMAs to promote movement and genetic diversity for GRSg population persistence and expansion.

Objective SSS 3: Identify and implement GRSg conservation actions that can augment, enhance, or integrate program conservation measures established in agency and state land use and policy plans, to the extent consistent with applicable law.

Objective SSS 4: In PHMAs and GHMAs, apply the concept of “avoid, minimize, and compensatory mitigation” for all human disturbance in areas not already excluded or closed, so as to avoid adverse effects on GRSg and its habitat. The first priority will be to avoid new disturbance; where this is not feasible, the second priority will be to minimize and mitigate any new disturbance (**Appendices F and I**).

Management Decisions (MD)

MD SSS-1: In PHMAs and GHMAs, work with the proponent/applicant, whether in accordance with a valid existing right or not, and use the following screening criteria to avoid effects of the proposed human activity on GRSg habitat¹

- A. First priority—locate project/activity outside PHMAs and GHMAs
- B. Second priority—if the project/activity cannot be placed outside PHMAs and GHMAs, locate the surface-disturbing activities in non-habitat areas first, then in the least suitable habitat for GRSg
 - I. In non-habitat, ensure the project/activity will not create a barrier to movement or connectivity between seasonal habitats and populations
- C. Third priority—collocate the project/activity next to or in the footprint of existing infrastructure

MD SSS 2: In PHMAs, the following conditions will be met in order to avoid, minimize, and mitigate any effects on GRSg and its habitat from the project/activity:²

- A. Manage discrete anthropogenic disturbances, whether temporary or permanent, so they cover less than 3 percent of 1) biologically significant units (BSUs; total PHMA area associated with a GRSg

¹The screening criteria would not be applicable to vegetation treatments being conducted to enhance GRSg habitat.

²The conditions would not be applicable to vegetation treatments being conducted to enhance GRSg habitat, with the exceptions of seasonal restrictions and noise.

population area (see **Appendix A; Figure 2-2**)) and 2) in a proposed project analysis area. See **Appendix E** (Disturbance Cap Guidance) for additional information on implementing the disturbance cap, including what is and is not considered disturbance and how to calculate the proposed project analysis area, as follows:

1. If the 3 percent human disturbance cap is exceeded on all lands (regardless of ownership) in PHMAs in any given BSU, then no further discrete human disturbances (subject to applicable laws and regulations, such as the 1872 Mining Law, as amended, and valid existing rights) will be permitted, by BLM within GRSG PHMA in any given BSU until the disturbance has been reduced to less than the cap (see Nevada exception under MD SSS 2 a. 3. **Appendix E**).
2. If the 3 percent disturbance cap is exceeded on all lands (regardless of land ownership) within a proposed project analysis area in a PHMA, then no further anthropogenic disturbance will be permitted by BLM until disturbance in the proposed project analysis area has been reduced to maintain the area under the cap (subject to applicable laws and regulations, such as the 1872 Mining Law, as amended, valid existing rights; see Nevada exception under MD SSS 2 a. 3. **Appendix E**).
 - a. For BLM land in the state of Nevada only, the following disturbance management protocol (DMP) is intended to provide for a 3 percent limitation on disturbance, except in situations where a biological analysis indicates a net conservation gain to the species.
 - Such discretionary activities that would cause disturbances in excess of 3 percent at the project or BSU scale (see **Appendix E**) will be prohibited, unless a technical team described below determines that new or site-specific information indicates the project can be modified to result in a net conservation gain at the BSU level. Factors considered by the team will include GRSG abundance and trends, habitat amount and quality, extent of project disturbance, location and density of existing disturbance, project design options and other biological factors.
 - Any exceptions to the 3 percent disturbance limitation may be approved by the Authorized Officer only with the concurrence of the State Director. The Authorized Officer may not grant an exception unless the NDOW, the USFWS, and the BLM unanimously find that the proposed action satisfies the conditions stated in the above paragraph. Such finding shall initially be made by the technical team, which consists of a field biologist or other GRSG experts from each respective agency. In the event the initial finding is not unanimous, the finding may be elevated to the BLM State Director, USFWS State Ecological Services Director and NDOW Director for final resolution. In the event their finding is not unanimous, the exception will not be granted (**Appendix E**).
3. For BLM land in the state of California only, subject to applicable laws and regulations and valid existing rights, if the average density of one energy and mining facility per 640 acres (the density cap) is exceeded on all lands (regardless of land ownership) in the PHMA within a proposed project analysis area, then no further disturbance from energy or mining facilities will be permitted by BLM: (1) until disturbance in the proposed project analysis area

has been reduced to maintain the limit under the cap; or (2) unless the energy or mining facility is co-located into an existing disturbed area. Energy and mining facilities to which this action applies are:

- Oil and gas wells and development facilities.
 - Wind towers
 - Geothermal wells/developments, and
 - Active locatable, leasable, and salable developments.
4. For proposed projects to be located, within existing designated utility corridors, the 3% disturbance cap may be exceeded at the project scale if the site specific NEPA analysis indicates that a net conservation gain to the species will be achieved. This exception is limited to projects which fulfill the use for which the corridors were designated (ex., transmission lines, pipelines) and the designated width of a corridor will not be exceeded as a result of any project co-location.
- B. In PHMA, in undertaking BLM management actions, and consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation, the BLM will require and ensure mitigation that provides a net conservation gain to the species, including accounting for any uncertainty associated with the effectiveness of such mitigation. The project/activity with associated mitigation (such as the use of the State of Nevada Conservation Credit System) will result in an overall net conservation gain to GRSG (see **Appendix F**).
- C. Authorized/permitted activities are implemented by adhering to the RDFs described in **Appendix C**, consistent with applicable law. At the site-specific scale, if an RDF is not implemented, at least one of the following must be demonstrated in the NEPA analysis associated with the project/activity:
- 1. A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g., due to the site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable.
 - 2. An alternative RDF is determined to provide equal or better protection for GRSG or its habitat.
 - 3. A specific RDF will provide no additional protection to GRSG or its habitat.
- D. In management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the USGS report, Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review Open File-Report 2014-1239 (Manier et al. 2014), in accordance with **Appendix B**.
- E. Seasonal restrictions will be applied during the period specified below to manage discretionary surface-disturbing activities and uses on public lands to prevent disturbances to GRSG during seasonal life-cycle periods:
- 1. In breeding habitat within 4 miles of active and pending GRSG leks from March 1 through June 30
 - a. Lek—March 1 to May 15

- b. Lek hourly restrictions—6 p.m. to 9 a.m.
- c. Nesting—April 1 to June 30
- 2. Brood-rearing habitat from May 15 to September 15
 - a. Early—May 15 to June 15
 - b. Late—June 15 to September 15
- 3. Winter habitat from November 1 to February 28

The seasonal dates may be modified due to documented local variations (e.g., higher/lower elevations) or annual climatic fluctuations (e.g., early/late spring, long/heavy winter), in coordination with NDOW and California Department of Fish and Wildlife (CDFW), in order to better protect GRSG and its habitat.

- F. Authorizations and permits will limit noise from discretionary activities (during construction, operation, and maintenance) to not exceed 10 decibels above ambient sound levels at least 0.25 mile from active and pending leks, from 2 hours before to 2 hours after sunrise and sunset during the breeding season. See **Appendix M**, Greater Sage-Grouse Noise Protocol.

MD SSS 3: In GHMAs, the following conditions will be met in order to avoid, minimize, and mitigate any effects on GRSG or its habitat from the project/activity:³

- A. In GHMAs, in undertaking BLM management actions, and consistent with valid existing rights and applicable law, in authorizing third-party actions that result in habitat loss and degradation, the BLM will require and ensure mitigation that provides a net conservation gain to the species, including accounting for any uncertainty associated with the effectiveness of such mitigation. The project/activity with associated mitigation (such as the use of the State of Nevada Conservation Credit System) in GHMAs will result in an overall net conservation gain to GRSG (see **Appendix F**, Regional Mitigation Strategy).
- B. Authorized/permitted activities are implemented adhering to the RDFs described in **Appendix C**, consistent with applicable law. At the site-specific scale, if an RDF is not implemented, at least one of the following must be demonstrated in the NEPA analysis associated with the project/activity:
 - 1. A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g., due to the site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable.
 - 2. An alternative RDF is determined to provide equal or better protection for GRSG or its habitat.
 - 3. A specific RDF will provide no additional protection to GRSG or its habitat.
- C. In undertaking BLM management actions, and consistent with valid and existing rights and applicable law in authorizing third-party actions, the BLM will apply the lek buffer-distances identified in the

³The conditions would not be applicable to vegetation treatments being conducted to enhance GRSG habitat, with exceptions for seasonal restrictions and noise.

USGS report, Conservation Buffer Distance Estimates for Greater Sage-Grouse—A Review Open File Report 2014-1239 (Manier et.al 2014)], in accordance with **Appendix B**.

D. Seasonal restrictions will be applied during the period specified below to manage discretionary surface-disturbing activities and uses on public lands to prevent disturbing GRSG during seasonal life cycle periods, as follows:

1. In breeding habitat within 4 miles of active and pending GRSG leks from March 1 through June 30
 - a. Lek—March 1 to May 15
 - b. Lek hourly restrictions—6 p.m. to 9 a.m.
 - c. Nesting—April 1 to June 30
2. Brood-rearing habitat from May 15 to September 15
 - a. Early—May 15 to June 15
 - b. Late—June 15 to September 15
3. Winter habitat from November 1 to February 28

The seasonal dates may be modified due to documented local variations (e.g., higher/lower elevations) or annual climatic fluctuations (e.g., early/late spring, long/heavy winter), in coordination with NDOW and CDFW, in order to better protect GRSG and its habitat.

E. Authorizations and permits will limit noise from discretionary activities (during construction, operation, and maintenance) to not exceed 10 decibels above ambient sound levels at least 0.25 mile from active and pending leks from 2 hours before to 2 hours after sunrise and sunset during the breeding season. See **Appendix M**, Greater Sage-Grouse Noise Protocol.

MD SSS 4: In OHMAs, authorized/permitted activities are implemented adhering to the RDFs described in **Appendix C**, consistent with applicable law. At the site-specific scale, if an RDF is not implemented, at least one of the following must be demonstrated in the NEPA analysis associated with the project/activity:

- A specific RDF is documented to not be applicable to the site-specific conditions of the project/activity (e.g., due to the site limitations or engineering considerations). Economic considerations, such as increased costs, do not necessarily require that an RDF be varied or rendered inapplicable.
- An alternative RDF is determined to provide equal or better protection for GRSG or its habitat.
- A specific RDF will provide no additional protection to GRSG or its habitat.

MD SSS 5: Designate SFA, as shown on **Figure 1-3** (2,797,400 acres). SFA will be managed as PHMAs, with the following additional management:

- Recommended for withdrawal from the General Mining Act of 1872, subject to valid existing rights

- Managed as NSO, without waiver, exception, or modification, for fluid mineral leasing
- Prioritized for vegetation management and conservation actions in these areas, including, but not limited to land health assessments, wild horse and burro management actions, review of livestock grazing permits/leases, and habitat restoration (see specific management sections).

MD SSS 6: Cooperate with federal and state agencies, universities, and other organizations to establish and maintain a GRSG telemetry database.

MD SSS 7: Work with project proponents to limit project-related noise, seasonally or annually (see MDs SSS 2 and SSS 3), in GRSG habitat where it would be expected to reduce functionality of habitats that support associated GRSG populations. Support the establishment of ambient baseline noise levels for leks in PHMAs and GHMAs.

As additional noise-related research and information emerge, specific new limitations appropriate to the type of projects being considered will be evaluated and appropriate measures will be implemented where necessary to minimize the potential for noise impacts on GRSG populations.

MD SSS 8: As determined by BLM in coordination with NDOW or CDFW, for any surface-disturbing activities involving mineral activities (to the extent possible under existing law) and rights-of-way actions proposed in PHMAs and GHMAs, the proponent will use the services of a qualified biologist approved by the BLM to conduct surveys for GRSG breeding activity during the GRSG breeding season before project activities begin. The surveys must encompass all suitable GRSG habitats within a minimum of 4 miles of the proposed activities. Surveys will be conducted following protocols established by state fish and wildlife agencies during planning operations and during project activities. GRSG seasonal habitat delineations will also be required within a minimum of 4 miles of project activities.

MD SSS 9a: In Nevada only, the BLM will consult with the Sagebrush Ecosystem Technical Team (SETT) for application of the “avoid, minimize, and compensate” mitigation strategy and the Conservation Credit System developed by the Nevada Natural Heritage Program and the SETT (2014a, 2014b) or other applicable mitigation system such as outlined in **Appendix I**. This will be to ensure that a net conservation gain of GRSG habitat is achieved in mitigating human disturbances in PHMAs and GHMAs (see **Appendix F**) on all agency-authorized activities. The specifics of the coordination will be identified in an MOU between the agencies.

MD SSS 9b: In California only, the BLM will follow the BLM mitigation strategy outlined in **Appendix F**.

MD SSS 10: When necessary or as new data becomes available, site-specific NEPA analysis on use authorizations in PHMA and GHMA will include project level adaptive management responses to address changed conditions in GRSG habitat and population trends (see **Appendix J**, Adaptive Management Plan).

MD SSS 11: Design and construct fences consistent with BLM H-1741-I, Fencing Standards Manual (BLM 1990), and apply the Sage-Grouse Fence Collision Risk Tool to Reduce Bird Strikes (NRCS 2012). Bring existing fencing into compliance as opportunities arise.

Disease

Objective SSS 5: Coordinate with state agencies to monitor trends of diseases, such as West Nile virus, in the subregion to determine if mitigation or additional RDFs need to be applied (consistent with applicable law) to use authorizations.

MD SSS 12: When developing or modifying water developments on BLM-administered lands in PHMAs, GHMAs, and OHMAs and in accordance with state water law and subject to valid existing rights, use applicable RDFs consistent with applicable law to mitigate potential impacts from West Nile virus. Bring existing water developments into compliance as opportunities arise.

Predation

Objective SSS 6: Manage human uses on public lands to reduce the effects of predation on GRSG.

MD SSS 13: Require authorizations to include stipulations and RDFs consistent with applicable law to reduce or eliminate opportunities to attract and provide nesting, cover, or perches for predators in PHMAs and GHMAs.

MD SSS 14: Coordinate with other federal, state, county, and tribal governments and local working groups to reduce GRSG deaths due to predation where it is determined to be additive or is a limiting factor influencing GRSG populations.

MD SSS 15: Reduce and eliminate artificial hunting perches and nesting surfaces for aerial predators (e.g., remove fences, nonworking fences, and power lines and install anti-perch devices on existing and new power lines).

Adaptive Management (Also see Appendix J)*Management Decisions (MD)*

MD SSS 17: As site-specific GRSG data (habitat assessments, lek counts, telemetry, etc.) is collected, the information will be included into future modeling efforts using the “*Spatially Explicit Modeling of Greater Sage-Grouse Habitat in Nevada and Northeastern California*” (Coates et al. 2014) to reflect the most up-to-date spatial representation of GRSG habitat categories. Through plan maintenance or plan amendment/revision, as appropriate, and in consultation with the Nevada Department of Wildlife and USFWS, based on the best scientific information, the updated modeling efforts may be adopted and appropriate allocation decisions and management actions will be applied to PHMA, GHMA, and OHMA. Future modeling efforts to incorporate site-specific GRSG data will utilize the same modeling methods (as described under *Methods and Results* in Coates et al. 2014) used to develop the current Nevada and Northeastern California Subregions’ GRSG habitat management categories. The addition of site-specific GRSG data will allow for the refinement of the spatial representation of the GRSG habitat management categories.

MD SSS 18: A BSU (see **Appendix A; Figure 2-2**) that has hit a soft trigger due to vegetation disturbance will be a priority for restoration treatments consistent with Fire and Invasives Assessment Tool (FIAT) (**Appendix J**).

MD SSS 19: If a soft trigger is reached, the BLM will identify the causal factor and apply additional project-level adaptive management and/or mitigation measures contained in the authorization (and for

future similar authorizations), to alleviate the specific or presumptive causes in the decline of GRSG populations or its habitats and include the following:

- The adjustment in management would be based on the causal factor and would affect only the area being impacted in the lek cluster or other appropriate scale (e.g., BSU)
- GRSG populations and habitat would continue to be monitored annually
- If the causal factor were not readily discernable, then an interdisciplinary team, including the BLM, Forest Service (as applicable), and state wildlife agency representatives, would identify the appropriate mitigation or adjusted management actions in a timely manner

MD SSS 20: Once a hard trigger has been reached, all responses in **Table J-1** and **Table J-2** in **Appendix J** will be implemented. This includes where soft triggers have been reached for both population and habitat.

MD SSS 21: When a hard trigger is hit in a PAC that has multiple BSUs, including those that cross state lines, the WAFWA Management Zone GRSG Conservation Team will convene to determine the cause, will put project level responses in place, as appropriate, and will discuss further appropriate actions to be applied. The team will also investigate the status of the hard triggers in other BSUs in the PAC and will invoke the appropriate plan response. Adopting any further actions at the plan level may require initiating a plan amendment process.

MD SSS 22: As determined by BLM in coordination with NDOW, for any surface-disturbing activities involving mineral activities and rights-of-way actions (with the possible exception of short duration activities outside of seasonal GRSG habitats) BLM will require that active and pending leks be monitored annually within 4 miles of disturbance until the use terminates and all disturbances have been restored. The proponent will fund the services of an independent qualified biologist approved by the BLM, in coordination with NDOW or CDFW, consistent with applicable law.

MD SSS 23: In making amendments to this plan, the BLM will coordinate with the FWS as BLM continues to meet its objective of conserving, enhancing and restoring GRSG habitat by reducing, minimizing or eliminating threats to GRSG and its habitat.

MD SSS 24: The hard and soft trigger data will be analyzed as soon as it becomes available after the signing of the ROD and then at a minimum, analyzed annually thereafter.

2.2.2 Vegetation (VEG)

Sagebrush-steppe

Objective VEG 1: In all SFA and PHMAs, the desired condition is to maintain all lands ecologically capable of producing sagebrush (but no less than 70%) with a minimum of 15% sagebrush cover or as consistent with specific ecological site conditions. The attributes necessary to sustain these habitats are described in Interpreting Indicators of Rangeland Health (BLM Tech Ref 1734-6).

Objective VEG 2: On public lands, establish, maintain, and enhance a resistant and resilient sagebrush vegetative community and restore sagebrush vegetation communities to reduce GRSG habitat

fragmentation and maintain or reestablish GRSG habitat connectivity over the long term (Chambers et al. 2014).

Objective VEG 3: Manage PHMAs and GHMAs for vegetation composition and structure, consistent with ecological site potential and to achieve GRSG habitat objectives (**Table 2-2**).

Management Decisions (MD)

MD VEG 1: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD VEG 2: Incorporate GRSG habitat objectives (**Table 2-2**) in the design of habitat restoration projects and manage treated areas to meet GRSG habitat objectives.

MD VEG 3: Use BLM GRSG habitat maps, habitat objectives (see **Table 2-2** for GRSG habitat objectives), ecological site potential, state and transition models, and concepts of resistance and resilience (**Appendix H**) to prioritize habitat restoration projects, including those following wildfire, to address the most limiting GRSG habitat vegetation components and to connect seasonal ranges.

Habitat restoration includes the following:

- i. Restoring sagebrush canopy in PHMAs and GHMAs to meet GRSG habitat objectives (**Table 2-2**)
- ii. Reestablishing perennial grasses and native forbs in PHMAs and GHMAs
- iii. Reducing or removing pinyon or juniper in PHMAs and GHMAs to enhance seasonal range connectivity and to maintain sagebrush canopy and understory integrity
- iv. Restore areas affected by wildfire and the continuing invasive annual fire cycle to meet GRSG habitat objectives (**Table 2-2**)
- v. Prioritize restoration in areas that have not crossed an ecological threshold

MD VEG 4: Plan vegetation treatments (including GRSG habitat treatments) in a landscape-scale context to address habitat fragmentation, effective patch size, invasive species presence, and intact sagebrush community protection, consistent with the GRSG habitat objectives identified in **Table 2-2**.

MD VEG 5: For Wyoming, mountain, and basin big sagebrush communities in PHMAs and GHMAs:

- i. Prioritize treatments that focus on enhancing, reestablishing, or maintaining the most limiting GRSG habitat component
- ii. Reestablish sagebrush to meet GRSG habitat objectives (**Table 2-2**)
- iii. Manage sagebrush communities to achieve age-class, structure, cover, and species composition objectives in GRSG habitat (**Table 2-2**)
- iv. Restore herbaceous understory in brush-dominated areas to meet GRSG habitat objectives (**Table 2-2**)

- v. Treat areas that contain cheatgrass and other invasive or noxious species to minimize competition and favor establishment of desired species (**Table 2-2**)
- vi. Treat disturbed areas in accordance with FIAT (see **Appendix H**), including implementation-level assessments

MD VEG 6: Manage for establishment of sagebrush in unmaintained nonnative seedings (e.g., crested wheatgrass seedings) in or next to GRSG habitat to meet habitat objectives (**Table 2-2**).

MD VEG 7: In PHMAs and GHMAs, give preference to native seeds for restoration, based on availability, adaptation (ecological site potential), and probability of success. Where the probability of success or adapted seed availability is low, nonnative seeds may be used, as long as they support GRSG habitat objectives. Choose native plant species outlined in Ecological Site Descriptions (ESDs), where available, to revegetate sites. Emphasize use of local seed collected from intact stands or greenhouse cultivation. If the commercial supply of appropriate native seeds and plants is limited, work with the BLM Native Plant Materials Development Program, Natural Resource Conservation Service (NRCS) Plant Material Program, or State Plant Material Programs. If currently available supplies are limited, use the materials that provide the greatest benefit for GRSG. In all cases, seed must be certified as weed free.

MD VEG 8: To increase seeding success and to ensure effective soil and seed contact, consider the use of specialized seed drills or other proven and effective methods that may become available based on new science.

MD VEG 9a: For Nevada BLM-managed lands, before implementation, establish project monitoring sites where vegetation treatment is planned. Treatment areas will be monitored both pre- and post-treatment on a multiple-year basis to ensure that project objectives are achieved.

MD VEG 9b: For California BLM-managed lands, before implementation, establish project monitoring sites where vegetation treatment is planned. Treatment areas will be monitored both pre- and post-treatment on a multiple-year basis to ensure that project objectives are achieved. Juniper treatments will be monitored in accordance with the Sage Steppe Ecosystem Restoration FEIS (BLM 2008).

MD VEG 10: On public lands, where the attributes, quality, or lack of GRSG winter habitat has been identified as a limiting factor, emphasize vegetation treatments in known winter habitat to enhance quality or reduce wildfire risk around or in winter habitat.

MD VEG 11: In perennial grass, invasive annual grass, and conifer-invaded cover types, restore sagebrush steppe with local sagebrush seedings or planted seedlings where feasible.

MD VEG 12: Continue to coordinate with NDOW, CDFW, and NRCS for all development or habitat restoration proposals in PHMAs and GHMAs. Also, coordinate with the Nevada SETT, tribes, and local working groups on projects proposed in sagebrush ecosystems.

Conifer encroachment

Objective VEG 4: In accordance with the vegetation dynamic development tool (VDDT; **Appendix L**), improve GRSG habitat by removing invading conifers in the number of acres shown in **Table 2-2** by decade for the next 50 years.

MD VEG 13: Remove conifers encroaching into sagebrush habitats, in a manner that considers tribal cultural values. Prioritize treatments closest to occupied GRSG habitats and near occupied leks and where juniper encroachment is phase I and phase 2. Use of site-specific analysis and tools like VDDT and FIAT (see **Appendix L** for VDDT and **Appendix H** for FIAT) will help refine the location for specific areas to be treated.

MD VEG 14: Do not construct or create new roads (temporary or permanent), skid trails, or landings in phase I pinyon or juniper removal areas during project implementation for vegetation treatments. Administrative access, including off-road travel with heavy equipment and vehicles, will be allowed during implementation.

MD VEG 15: Only treat habitats in late phase II or phase III pinyon or juniper condition to create movement corridors, connect habitats, or reduce the potential for catastrophic fire (see **Table 2-3**).

Table 2-3
Conifer Treatment Acres per Decade

State	Mechanical Treatment ¹	Prescribed Fire ²
Nevada	649,000	8,000
California ³	34,000	10,000
Total	683,000	18,000

¹Removal of conifers that have invaded sagebrush, generally phase one juniper that is 10 percent or less.

²Acres are those that are greater than 30 percent sagebrush canopy cover and/or invaded by 10 percent or greater conifer.

³BLM California-managed lands will be consistent with annual acres of treatment specified in the Sage Steppe Ecosystem Restoration FEIS (BLM 2008).

Invasive Species

Objective VEG 5: Reduce the amount of GRSG habitat loss due to wide-spread wildfires and invasion by nonnative species.

Objective VEG 6: Control invasive species infestations in GRSG habitat already compromised by invasion.

Objective VEG 7: In accordance with the VDDT (**Appendix L**), improve GRSG habitat by treating annual grasses in the number of acres shown in **Table 2-4** by decade using the FIAT (**Appendix H**).

Table 2-4
Annual Grass Treatment by Decade for 50 Years

State	Grass Restoration ¹
Nevada	1,354,000
California	257,000
Total	1,611,000

¹Acres presently dominated by annual grasses that could be improved by herbicide application or seeding of perennial vegetation

MD VEG 16: Prevent the establishment of invasive species into uninvaded areas in PHMAs and GHMAs through properly managed grazing and by conducting systematic and strategic detection surveys, collecting data, mapping these areas, and engaging in early response to contain and eradicate invasion if it occurs.

MD VEG 17: Control the spread and introduction of noxious weeds listed by the Nevada Department of Agriculture and California Department of Food and Agriculture (NAC 555.010, Classes A through C, inclusive and 3 CCR 4500, Noxious Weed Species Pest Rating A, B, C, and Q) and undesirable nonnative plant species (Gelbard and Belnap 2003; Bergquist et al. 2007). Work with federal, state, local, and tribal groups, such as Weed Control Districts, Cooperative Weed Management Areas, and Conservation Districts, in detecting and treating nonnative species.

MD VEG 18: Where scientific support is lacking, carefully construct treatments to rigorously assess the value or detriment of untested methods to determine their value for future application to GRSG habitats.

MD VEG 19: The BLM will cooperate with other federal, state, tribal and local agencies along with academia in researching the development of biological control agents and deploying emerging technologies as they become available.

MD VEG 20: Monitor and adjust treatment sites and methods as needed to ensure effectiveness of efforts to prevent and control invasive species and restore GRSG habitat.

MD VEG 21: Assess invasive annual grass presence and distribution before implementing vegetation restoration projects to determine if treatments are required to treat invasive annual grasses.

MD VEG 22: Treat sites in PHMAs and GHMAs that contain invasive species infestations through an integrated pest management (IPM) approach, using fire, chemical, mechanical, and biological (e.g., targeted grazing) methods, based on site potential and in accordance with FIAT (**Appendix H**). Treat areas that contain cheatgrass and other invasive or noxious species to minimize competition and favor establishment of desired species.

Riparian and Wetlands Habitat

Objective VEG 8: Manage riparian areas in PHMAs and GHMAs for vegetation composition and structure, consistent with ecological site potential and to achieve GRSG habitat objectives (**Table 2-2**).

Objective VEG 9: Manage upland habitat associated with riparian areas to promote cover relative to site potential to facilitate brood-rearing habitat (**Table 2-2**).

Objective VEG 10: Where riparian function has been compromised or lost, manage to restore riparian function and meet GRSG habitat objectives (**Table 2-2**).

Objective VEG 11: In riparian and wet meadow areas, inventory, monitor, and control invasive species in PHMAs and GHMAs.

MD VEG 23: Design and implement vegetation treatments in PHMAs and GHMAs to restore, enhance, and maintain riparian areas (**Table 2-2**).

MD VEG 24: Consider an array of vegetation treatments to increase edge and expand mesic areas in PHMAs and GHMAs where riparian extent is limited by shrub encroachment (**Table 2-2**).

MD VEG 25: Manage lotic riparian habitats in conjunction with adjacent terraces and valley bottoms as natural fuel breaks to reduce the size and frequency of wildfires in PHMAs and GHMAs.

Climate Change

Objective VEG 12: Use the landscape approach and promote landscape-scale, ecosystem-based actions to enhance resiliency and sustainability of PHMAs and GHMAs to climate stress.

Objective VEG 13: In PHMAs and GHMAs, manage risks of GRSG habitat degradation or loss from landscape stressors of drought, invasive species, and wildfire exacerbated by climate change to maintain existing GRSG populations and habitats.

MD VEG 26: As climate change data become available through Rapid Ecoregional Assessments or other ecological studies, identify areas of unfragmented GRSG habitat and corridors that provide the life-cycle and genetic transfer needs for GRSG and adjust resource management practices, as needed.

MD VEG 27: Cooperate with multiple agencies and stakeholders to establish and maintain a network of climate monitoring sites and stations.

2.2.3 Fire and Fuels Management (FIRE)

Wildfire Management

Objective FIRE 1: The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be done based on the values to be protected, human health and safety, and the costs of protection. GRSG habitat will be prioritized commensurate with property values and other critical or sensitive habitats to be protected, with the goal to restore, enhance, and maintain areas suitable for GRSG.

Management Decisions (MD)

MD FIRE 1: Support the conservation of GRSG habitat objectives (**Table 2-2**) through appropriate wildfire management planning, coordination, staffing, resource allocations, training, equipment, and management oversight.

MD FIRE 2: Prioritize fire operations and fuels management decisions in SFA first, followed by PHMAs outside of SFA in accordance with the implementation-level FIAT assessments, and then GHMAs for conservation and protection during fire operations and fuels management decision-making. When suppression resources are widely available, place maximum efforts on limiting fire growth in GHMAs as well.

MD FIRE 3: BLM planning units, in coordination with the USFWS and relevant state agencies, will annually review the GRSG landscape wildfire and invasive species habitat assessments (FIAT). Based on this review, revised actions to ameliorate invasive species must be incorporated into the assessment.

MD FIRE 4: Compile relevant field office- and district-level information into the statewide GRSG Annual Operating Handbook for use by resource advisors, wildfire crews, and agency administrators. The handbook will contain GRSG maps (including habitat and fuels treatment maps) and lists of state and local GRSG resource advisors and their contact information, local guidance, and other relevant information for each field office and district, aggregated into a statewide document.

MD FIRE 5: Coordinate and collaborate with federal, tribal, state, and local governments and associations sanctioned through either California or Nevada that meet fire standards for effective and efficient wildfire response.

MD FIRE 6: Strengthen and improve interagency wildfire prevention statewide through targeted wildfire prevention messages, including providing education on GRSG habitat loss, updating interagency agreements, and conducting wildfire prevention workshops and demonstration projects.

Pre-Suppression

Objective FIRE 2: Use pre-suppression efforts to reduce the size and impact of wildfires in SFA, PHMAs, and GHMAs.

Objective FIRE 3: Protect post-fire treatments in SFA first, followed by PHMAs outside of SFA, and then GHMAs from subsequent wildfires.

MD FIRE 7: Identify and prioritize areas that are vulnerable to wildfires and prescribe actions important for GRSG protection, in accordance with FIAT (see **Appendix H**, USDI 2015) and further refined in the implementation-level FIAT assessments.

MD FIRE 8: Create fire management plans to guide wildfire suppression in order to protect PHMAs and GHMAs.

MD FIRE 9: Before the fire season, train GRSG resource advisors on wildfire suppression organization, objectives, tactics, and procedures to develop a cadre of qualified individuals. Involve state wildlife agency experts in fire operations through the following:

- Instruction of resource advisors during preseason trainings
- Qualification as resource advisors
- Coordination with resource advisors before fire season
- Contribution to incident planning with information, such as habitat features or other key data useful in fire decision-making

Suppression

Objective FIRE 4: Use suppression to reduce the size and impact of wildfires in SFA, PHMAs, and GHMAs.

MD FIRE 10: Provide local GRSG habitat maps to dispatch offices and extend attack incident commanders to prioritize wildfire suppression resources and design suppression tactics. Ensure GRSG habitat maps and suppression strategies are uploaded and updated in WFDSs.

- **MD FIRE 11:** Assign a resource advisor with GRSG habitat expertise or with access to GRSG habitat expertise to all extended attack fires in or near SFA, PHMAs, and GHMAs.
- **MD FIRE 12:** In advance of critical fire weather, station additional federal fire suppression resources to optimize a quick and efficient response in SFA, PHMAs, and GHMAs.

MD FIRE 13: During periods of multiple fires, ensure line officers prioritize decisions by coordinating with resource advisors.

MD FIRE 14: To the extent possible, locate wildfire suppression facilities (e.g., base camps, spike camps, drop points, staging areas, and helicopter bases) in areas to avoid disturbing PHMAs and GHMAs. These include disturbed areas, grasslands, roads and trails, or in other areas with existing disturbance or minimal sagebrush cover.

MD FIRE 15: Document fire operations (e.g., disturbance) in PHMAs and GHMAs for potential follow-up coordination and restoration.

MD FIRE 16: Use indirect attack tactics (including burn-out operations) when:

- Direct attack is not effective in stopping fires with the potential of becoming significantly larger due to fuel loading, weather conditions, and fire behavior.
- If firefighter and public safety would be threatened or compromised.

MD FIRE 17: Use retardant, mechanized equipment, and other available resources to minimize burned acreage during initial attack. As safety allows, conduct mop-up where the black adjoins unburned islands, dog legs, or other habitat features to minimize sagebrush loss.

MD FIRE 18: Minimize unnecessary cross-country vehicle travel during fire operations in GRSG habitat.

Fuels Management

Objective FIRE 5: Protect and enhance PHMAs and GHMAs and areas of connectivity that support GRSG populations, including large contiguous blocks of sagebrush, through fuels management and incorporation of the FIAT assessment (**Appendix H**).

MD FIRE 19: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD FIRE 20: In PHMAs and GHMAs, apply fuels treatments on a landscape level to modify fire behavior, intensity, complexity (fire patchiness), size, and effects in which fire management efforts are enhanced.

MD FIRE 21: Establish and maintain fuel breaks to protect GRSG and its habitat to limit fire size and mitigate fire behavior to increase suppression effectiveness. When possible, establish fuel breaks next to roads or other previously disturbed areas.

MD FIRE 22: Use a full range of fuels management strategies and tactics within acceptable risk levels across the range of GRSG habitat consistent with land use plan direction.

MD FIRE 23: If prescribed fire is used in GRSG habitat, the NEPA analysis for the Burn Plan will address:

- why alternative techniques were not selected as a viable option
- how GRSG goals and objectives will be met by its use
- how the COT report objectives will be addressed and met
- a risk assessment to address how potential threats to GRSG habitat will be minimized.

Allow prescribed fire as a vegetation or fuels treatment, and it shall only be considered after the NEPA analysis for the burn plan has addressed the four bullets outlined above. Prescribed fire can be used to meet specific fuels objectives that will protect GRSG habitat in PHMAs (e.g., creation of fuel breaks that would disrupt the fuel continuity across the landscape in stands where annual invasive grasses are a minor component in the understory, burning slash piles from conifer reduction treatments, used as a component with other treatment methods to combat annual grasses and restore native plant communities).

Allow prescribed fire in known winter range, and it shall only be considered after the NEPA analysis for the burn plan has addressed the four bullets outlined above. Any prescribed fire in winter habitat will need to be designed to strategically reduce wildfire risk around and/or in the winter range and designed to protect winter range habitat quality.

MD FIRE 24: In coordination with the USFWS and relevant state agencies and in accordance with FIAT (see **Appendix H**), develop a fuels management strategy for the BLM with large blocks of GRSG habitat. The strategy shall include an up-to-date fuels profile, land use plan direction, current and potential habitat fragmentation, sagebrush and GRSG ecological factors, and active vegetation management steps to provide critical breaks in fuel continuity. When developing this strategy, consider the risk of increased habitat fragmentation from a proposed action versus the risk of large-scale fragmentation posed by wildfires if the action were not taken.

MD FIRE 25: Design fuels treatments through an interdisciplinary team process to expand, enhance, maintain, and protect PHMAs and GHMAs. Fuel reduction techniques, such as prescribed fire and chemical, biological (including targeted grazing), and mechanical treatments, are acceptable. Use green strips and fuel breaks, where appropriate, to protect seeding from subsequent fires.

MD FIRE 26: In coordination with the USFWS and relevant state agencies and in accordance with FIAT (see **Appendix H**), BLM will identify treatment needs for wildfire and invasive species management. Ongoing treatment needs will be coordinated on state and regional scales and across jurisdictional boundaries for long-term conservation of GRSG and its habitat.

MD FIRE 27: On project completion, monitor and manage fuels projects to ensure long-term success, including persistence of seeded species and other treatment components. Control invasive vegetation post-treatment.

MD FIRE 28: Design fuels treatments to protect sagebrush ecosystems, modify fire behavior, restore ecological function, and create landscape patterns that most benefit PHMAs and GHMAs and promote use by GRSG.

MD FIRE 29: Train fuels treatment personnel on GRSG biology, habitat requirements, and identification of areas used locally.

MD FIRE 30: Use burning prescriptions that minimize undesirable effects on vegetation or soils (e.g., minimize killing desirable perennial plant species and reduce risk of annual grass invasion) and incorporate FIAT assessment (Chambers et. al 2014) in PHMAs and GHMAs.

MD FIRE 31: Ensure proposed sagebrush treatments are planned with interdisciplinary input from the BLM and coordinated with USFWS and state fish and wildlife agencies to meet GRSG habitat objectives (**Table 2-2**).

MD FIRE 32: Design vegetation treatments in areas of high fire frequency to facilitate firefighter safety, reduce the potential acres burned, and reduce the fire risk to GRSG habitat.

MD FIRE 33a: For Nevada BLM-administered lands, before implementation, establish project monitoring sites where fuels management projects are planned. Monitor treatment areas both pre- and post-treatment on a multiple-year basis to ensure that project objectives are achieved.

MD FIRE 33b: For California BLM-managed lands, before implementation, establish project monitoring sites where fuels management projects are planned. Monitor treatment areas both pre- and post-treatment on a multiple-year basis to ensure that project objectives are achieved. Juniper treatments will be monitored in accordance with the Sage Steppe Ecosystem Restoration FEIS (BLM 2008).

Post Fire Management

Objective FIRE 6: Retain, protect, and improve intact unburned sagebrush communities in burned areas by incorporating the FIAT assessment (Chambers et. al 2014).

MD FIRE 34: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD FIRE 35: Prioritize post-fire treatments in PHMAs and GHMAs to maximize benefits to GRSG and its habitat. Focus post-fire treatments on replacing or reestablishing burned sagebrush habitat with the appropriate cover and structure to support GRSG habitat objectives (**Table 2-2**).

MD FIRE 36: In post-fire rehabilitation plans in PHMAs and GHMAs, design revegetation projects to accomplish the following:

- Maintain and enhance unburned intact sagebrush communities when at risk from adjacent threats
- Stabilize soils
- Reestablish hydrologic function
- Maintain and enhance biological integrity

- Promote plant resiliency
- Limit expansion or dominance of invasive species
- Reestablish native species

MD FIRE 37: Implement post-fire treatments in PHMAs and GHMAs that emphasize stabilizing, rehabilitating, and restoring sagebrush ecosystems damaged by wildfires, including controlling invasive species.

MD FIRE 38: Increase post-fire treatment activities in PHMAs and GHMAs through the use of integrated funding opportunities with other resource programs and partners.

MD FIRE 39: Following post-fire treatments, monitor and implement management actions in PHMAs and GHMAs that promote healthy perennial grass, shrub and forb communities, and lentic (slow-moving freshwater) and lotic (rapid freshwater) riparian habitats so as to further restoration and ensure long-term persistence of seeded or pre-burn native plants, in accordance with GRSG habitat objectives (Table 2-2).

MD FIRE 40: Evaluate the potential for sagebrush island plantings based on ESDs in large burn areas that may lack sufficient sagebrush seed sources in order to ensure the reestablishment of sagebrush in GRSG habitat.

MD FIRE 41: Monitor post-fire rehabilitation treatments on a multiple-year basis to ensure that project objectives are achieved.

MD FIRE 42: Use GRSG habitat objectives (Table 2-2) and emphasize the use of native plant species in post-fire rehabilitation (e.g. reseeding), recognizing that nonnative species may be necessary, depending on the availability of native seed and prevailing site conditions. Selected species shall maintain site ecological function based on pre-burn conditions and anticipated threat of invasive and noxious weed establishment. Use ESDs and state and transition models if available.

2.2.4 Livestock Grazing (LG)

Objective LG I: Manage permitted livestock grazing to maintain and/or enhance PHMAs and GHMAs to meet or make progress towards meeting all GRSG life-cycle requirements and habitat objectives (Table 2-2), based on site potential.

Management Decisions (MD) (see Appendix A; Figure 2-3)

MD LG I: When livestock management practices are determined to not be compatible with meeting or making progress towards achievable habitat objectives following appropriate consultation, cooperation and coordination, implement changes in grazing management through grazing authorization modifications, or allotment management plan implementation. Potential modifications include, but are not limited to, changes in:

- Season or timing of use;
- Numbers of livestock;
- Distribution of livestock use;

- Duration and/or level of use;
- Kind of livestock (e.g., cattle, sheep, horses, or goats) (Briske et al. 2011);
- Grazing schedules (including rest or deferment);
- Class of livestock;
- Grazing schedules (including rest or deferment)
- Making allotment unavailable to grazing

*Not in priority order

MD LG 2: The BLM will prioritize (1) the review of grazing permits/leases, in particular to determine if modification is necessary prior to renewal, and (2) the processing of grazing permits/leases in SFA followed by PHMAs outside of the SFA. In setting workload priorities, precedence will be given to existing permits/leases in these areas not meeting land health standards, with focus on those containing riparian areas, including wet meadows. The BLM may use other criteria for prioritization to respond to urgent natural resource concerns (e.g., fire) and legal obligations.

MD LG 3: The NEPA analysis for renewals and modifications of livestock grazing permits/leases that include lands within SFA and PHMAs will include specific management thresholds based on GRSG Habitat Objectives Table (**Table 2-2**), Land Health Standards (43 CFR, Part 4180.2) and ecological site potential, and one or more defined responses that will allow the authorizing officer to make adjustments to livestock grazing that have already been subjected to NEPA analysis.

MD LG 4: Complete land health assessments in PHMAs and GHMAs to identify whether or not GRSG habitat objectives (**Table 2-2**) are being met. The priority order for completing land health assessments in GRSG habitat is:

- Allotments containing SFA that have never been evaluated;
- Allotments containing SFA that have not been re-evaluated in 10 or more years;
- Allotments containing PHMAs that have never been evaluated;
- Allotments containing PHMAs that have not been re-evaluated in 10 or more years;
- Allotments containing GHMAs that have never been evaluated;
- Allotments containing GHMAs that have not been re-evaluated in 10 or more years.

MD LG 5: If results from a land health assessment indicate that GRSG habitat objectives (**Table 2-2**) are not met in SFA, PHMAs, or GHMAs and grazing is a causal factor, and until appropriate modifications (MD LG 1) are incorporated through the permit renewal process, implement management strategies that may include, but are not limited to, the following:

- Provide periods of rest or deferment during critical growth periods of key vegetation species
- Limit grazing duration and intensity to allow plant growth sufficient to meet GRSG habitat objectives (**Table 2-2**)

- Employ herd management techniques to minimize impacts of livestock on breeding, nesting, and brood-rearing habitat during the breeding season (March 1 to June 30; Lek—March 1 to May 15, and Nesting—April 1 to June 30)
- Consider any temporary projects that can mitigate livestock impacts (e.g., temporary fencing or temporary water hauling locations;
- Work with permittees to avoid concentrated turn-out locations for livestock within 4 miles of active and pending leks from March 1 to June 30
- Avoid domestic sheep use and bedding areas and herder camps within 2 miles of active and pending leks from March 1 to June 30
- Utilizing land features and roads on maps provided to the permittee to help delineate livestock use avoidance areas
- Considering no grazing from May 15 – Sept. 15 in riparian areas and wet meadows.
- Removing livestock within 3-7 days for the remainder of the grazing year once the allowable use levels are reached (BLM 1996, Burton et. al 2011, Cagney et. al, 2010, Connelly et. al 2000, France et. al 2008, Hagen et. al 2007, Holechek 1988, Platts 1990, and Tanaka et. al 2014):
 - In riparian areas and wet meadows the allowable percent utilization is 35% woody species, and a minimum stubble height of 4-6 inches (10-15 cm) for herbaceous riparian vegetation based on site.
 - In mountain big sage habitat, the allowable percent utilization is 40 % herbaceous key species and/or 35 % shrub key species.
 - In Wyoming Basin big sage habitat, the allowable percent utilization is 35% herbaceous key species and/or 35 % shrub key species.
 - In black sage habitat, the allowable percent utilization is 35% herbaceous key species and/or 35 % shrub key species.

MD LG 6: Appropriate allowable utilization levels will be defined through the grazing permit renewal process. At least one alternative in the NEPA process will consider the utilization levels identified in MD LG 5.

MD LG 7: In pastures where post livestock removal use monitoring results in utilization levels that exceed allowable use levels and livestock are identified as a causal factor, reduce animal unit months (AUMs) grazed the following year accordingly. AUMs cannot be applied to another pasture that is already being used by livestock or is being purposefully rested.

MD LG 8: Within PHMAs and GHMAs, incorporate terms and conditions into grazing permits to meet GRSG habitat objectives (**Table 2-2**), specific terms and conditions will be based on rangeland health assessments (and subsequent monitoring data).

MD LG 9: When a transfer application is received for preference on an allotment within GRSG habitat:

- **Transfer of Preference:** A transfer of preference will be approved unless the applicant does not meet qualifications (43 CFR, Part 4110.1 and 4110.2). A transfer will be approved to an unqualified applicant if 4110.2-3(e) applies.
- **Issuing the permit:** In accordance with Section 402(c)(2) of FLPMA, a new permit will be issued to the new preference holder with the same terms and conditions as the terminated permit unless:
 - A NEPA analysis of alternative terms and conditions has been completed. If changes in terms and conditions are needed to meet sage-grouse habitat needs or otherwise make progress toward meeting land health standards, issue a decision offering a permit with the new terms and conditions
- If a new permit is issued as required by Section 402(c)(2) of FLPMA, then determine priority for completing land health evaluations, habitat assessments and NEPA analysis as described in MD LG 1.

MD LG 10: In any allotment where land health standards were not met and livestock grazing was found to be a significant causal factor, compliance monitoring will be conducted annually until GRSG habitat objectives (**Table 2-2**) are met. If compliance monitoring finds that the implemented management strategies identified in MD LG 5 are not achieving the desired results, a change in action will be required.

MD LG 11: Allotments within SFA, followed by those within PHMAs, and focusing on those containing riparian areas, including wet meadows, will be prioritized for field checks to help ensure compliance with the terms and conditions of the grazing permits. Field checks could include monitoring for actual use, utilization, and use supervision.

MD LG 12: Grazing management strategies for riparian areas and wet meadows will, at a minimum, maintain or achieve proper functioning condition (PFC) and promote GRSG brood-rearing habitat objectives (**Table 2-2**) within PHMAs and GHMAs.

MD LG 13: For range improvement projects, review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD LG 14: Build or modify livestock exclosures so that they are large enough to provide hiding cover to GRSG and other wildlife and to reduce the possibility of wildlife collisions with fences (Christiansen 2009; Stevens 2011; NRCS 2012).

MD LG 15: In accordance with state water law and subject to valid existing rights, remove or modify water developments that are negatively impacting GRSG habitats.

MD LG 16: Authorize new water developments for diversion from spring or seep source, in accordance with state water law and subject to valid existing rights when PHMAs and GHMAs will benefit from or not be negatively impacted by the new development. This includes developing new water sources for livestock as part of a grazing management plan to improve GRSG habitat.

MD LG 17: Modify water development projects to ensure riparian habitats in PHMAs and GHMAs are being maintained or improved in compliance with valid existing rights and in accordance with state water law.

MD LG 18: Locate salting and supplemental feeding locations, temporary or mobile watering, and new handling facilities (e.g., corrals and chutes) at least 1 mile from riparian areas, springs, and meadows. The distance can be greater based on site-specific conditions.

MD LG 19: In PHMAs and GHMAs, remove livestock ponds built in perennial channels that are negatively impacting riparian habitats, either directly or indirectly, unless riparian access is able to be controlled and negative impacts effectively mitigated (e.g.; water gap fence to pond), and do not permit new ones to be built in these areas subject to valid existing rights. Prior to pond removal, offsite watering options will be examined and considered.

MD LG 20: In PHMA and GHMA, rest areas that have received vegetative treatments from livestock grazing until resource monitoring data verifies the treatment objectives are being met and an appropriate grazing regime has been developed. Any livestock grazing temporary suspended use or other management changes per 43 CFR, Part 4110.3-2a for the purpose of a vegetation treatment will be done through the grazing decision, prior to treatment.

MD LG 21: At the time a permittee or lessee voluntarily relinquishes a permit or lease, the BLM will consider whether the public lands where that permitted use was authorized shall remain available for livestock grazing or be used for other resource management objectives, such as reserve common allotments and fire breaks. This does not apply to or impact grazing preference transfers, which are addressed in 43 CFR, Part 4110.2-3.

MD LG 22: After grazing rest associated with vegetation treatments in PHMAs and GHMAs, monitor annually for a minimum of 5 years to ensure project objectives are being maintained.

MD LG 23: Fences shall not be constructed or reconstructed within 1.2 miles from the perimeter of occupied leks, unless the collision risk can be mitigated through design features or markings (e.g., mark, laydown fences, and design).

2.2.5 Wild Horses and Burros (WHB)

Management Decisions (MD)

MD WHB 1: For WHB management activities (e.g., gathers), review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD WHB 2: Manage herd management areas (HMAs) in GRSG habitat within established AML ranges to achieve and maintain GRSG habitat objectives (**Table 2-2**).

MD WHB 3: Complete rangeland health assessments for HMAs containing GRSG habitat using an interdisciplinary team of specialists (e.g., range, wildlife, and riparian). The priorities for conducting assessments are:

1. HMAs containing SFA;
2. HMAs containing PHMAs, which include riparian areas;
3. HMAs containing only GHMAs;

4. HMAs containing sagebrush habitat outside of PHMAs and GHMAs mapped habitat;
5. HMAs without GRSG habitat.

MD WHB 4: Prioritize gathers and population growth suppression techniques in HMAs in GRSG habitat, unless removals are necessary in other areas to address higher priority environmental issues, including herd health impacts. Place higher priority on herd areas not allocated as HMAs and occupied by wild horses and burros in SFA, followed by PHMAs.

MD WHB 5: In SFA and PHMAs outside SFA, assess and adjust AMLs through the NEPA process within HMAs when wild horses or burros are identified as a significant causal factor in not meeting rangeland health standards, even if current AML is not being exceeded.

MD WHB 6: In SFA and PHMAs outside of SFA, monitor the effects of WHB use in relation to GRSG habitat objectives (**Table 2-2**) on an annual basis to help determine future management actions.

MD WHB 7: Develop or amend herd management area plans (HMAPs) to incorporate GRSG habitat objectives (**Table 2-2**) and management considerations for all HMAs within GRSG habitat, with emphasis placed on SFA and PHMAs outside of SFA.

MD WHB 8: Consider removals or exclusion of WHB during or immediately following emergency situations (such as fire, floods, and drought) to facilitate meeting GRSG habitat objectives (**Table 2-2**) where HMAs overlap with GRSG habitat.

MD WHB 9: When conducting NEPA analysis for wild horse/burro management activities, water developments, or other rangeland improvements for wild horses, address the direct and indirect effects to GRSG populations and habitat. Implement any water developments or rangeland improvements using the criteria identified for domestic livestock.

MD WHB 10: Coordinate with professionals from other federal and state agencies, researchers at universities, and others to utilize and evaluate new management tools (e.g., population growth suppression, inventory techniques, and telemetry) for implementing the WHB program.

2.2.6 Mineral Resources (MR)

Leasable Minerals

Objective MR 1: Priority will be given to leasing and development of fluid mineral resources, including geothermal, outside of PHMAs and GHMAs. When analyzing leasing and authorizing development of fluid mineral resources, including geothermal, in PHMAs and GHMAs, that are subject to applicable stipulations for the conservation of GRSG, priority will be given to development in non-habitat areas first and then in the least suitable habitat for GRSG. The implementation of these priorities will be subject to valid existing rights and any applicable law or regulation, including, but not limited to, 30 U.S.C. 226(p) and 43 C.F.R. 3162.3-1(h).

Objective MR 2: Where a proposed fluid mineral development project on an existing lease could adversely affect GRSG populations or habitat, the BLM will work with the lessees, operators, or other project proponents to avoid, reduce and mitigate adverse impacts to the extent compatible with lessees' rights to drill and produce fluid mineral resources. The BLM will work with the lessee, operator, or

project proponent in developing an application for permit to drill (APD) for the lease to avoid and minimize impacts on GRSG or its habitat and will ensure that the best information about GRSG and its habitat informs and helps to guide development of such federal leases.

Management Decisions (MD)

Unleased Fluid Minerals

MD MR 1: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD MR 2: Manage SFA as NSO without waivers, exceptions, or modifications (see **Appendix A; Figure 2-4**).

MD MR 3: In PHMAs outside of SFA, no waivers or modifications to an oil and gas lease no-surface-occupancy stipulation will be granted. In PHMAs, the Authorized Officer may grant an exception to an oil and gas lease no-surface-occupancy stipulation only where the proposed action:

- i. Will not have direct, indirect, or cumulative effects on GRSG or its habitat; or,
- ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and will provide a clear conservation gain to GRSG.

Exceptions based on conservation gain (ii) may only be considered in (a) PHMAs of mixed ownership where federal minerals underlie less than fifty percent of the total surface, or (b) Areas of the public lands where the proposed exception is an alternative to an action occurring on a nearby parcel subject to a valid federal oil and gas lease existing as of the date of this RMP amendment. Exceptions based on conservation gain must also include measures, such as enforceable institutional controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action's impacts (see **Appendix G**).

Any exceptions to this lease stipulation may be approved by the Authorized Officer only with the concurrence of the State Director. The Authorized Officer may not grant an exception unless the applicable state wildlife agency, the USFWS, and the BLM unanimously find that the proposed action satisfies (i) or (ii). Such finding shall initially be made by a team of one field biologist or other GRSG expert from each respective agency. In the event the initial finding is not unanimous, the finding may be elevated to the appropriate BLM State Director, USFWS State Ecological Services Director, and state wildlife agency head for final resolution. In the event their finding is not unanimous, the exception will not be granted. Approved exceptions will be made publicly available at least quarterly.

MD MR 4a: For BLM land in the state of Nevada only, in the portions of the PHMAs outside of SFA, geothermal projects may be considered for authorization if all of the following conditions are met:

- A team comprised of BLM, FWS, and NDOW specialists advises the BLM State Director on appropriate mitigation measures for the project and its ancillary facilities, including lek buffer distances using the best available science;
- Mitigation actions are consistent with this Plan's mitigation strategy such as the Nevada Conservation Credit System, and;

- The footprint of the project is consistent with the disturbance management protocols identified in this plan (see MD SSS 2 and **Appendix E**)

MD MR 4b: For BLM lands in California only, manage geothermal leasing in PHMAs in accordance with MD MR 3 (see **Appendix G**).

MD MR 5: In GHMAs, manage oil and gas and geothermal fluid minerals with moderate constraints, timing limitations, and controlled surface use stipulations (see **Appendix A; Figure 2-4**).

MD MR 6: In PHMAs and GHMAs, allow only geophysical exploration that does not crush sagebrush or create new or additional surface disturbance. Examples of technologies that may meet this requirement are drilling methods using helicopters, articulated rubber-tired vehicles that leave no trace, and vibroseis geophysical operations on roads and bladed shoulders.

MD MR 7: Prohibit surface shot methods in PHMAs.

Leased Federal Fluid Mineral Estate Actions

MD MR 8: Review Objective SSS 4, and to the extent allowed by law, apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD MR 9: Use directional and horizontal drilling to reduce surface disturbance.

MD MR 10: On leased federal fluid mineral estate, where no APD or geothermal drilling permit (GDP) has been issued, apply RDFs consistent with applicable law and other conditions of approval (COAs) that conserve GRSG. Manage existing fluid mineral leases through COAs applied at the time APD or GDP is approved.

MD MR 11: On leased federal fluid mineral estate in PHMAs, complete master development plans for oil and gas in lieu of APD-by-APD, or operations/utilization plans for geothermal processing for all but exploration wells.

MD MR 12: On leased, federal, fluid mineral estate in PHMAs, require a full reclamation bond specific to the site. Ensure bonds are sufficient for reclamation costs for full restoration. Base the reclamation costs on the assumption that BLM contractors will perform the work.

MD MR 13: In PHMAs and GHMAs, place infrastructure in already disturbed locations to the extent feasible.

MD MR 14: Locate new compressor stations outside PHMAs and GHMAs and design them to reduce noise that may be directed toward PHMAs and GHMAs (see MDs SSS 2 and SSS 3 and **Appendix M**).

Locatable Minerals

MD MR 15: Review Objective SSS 4, and to the extent allowed by law, apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD MR 16: Recommend for withdrawal SFA under the General Mining Act of 1872, as amended, subject to valid existing rights (see **Appendix A; Figures 2-1 and 2-4**).

MD MR 17: On public lands, manage disturbances associated with notice-level activity in GRSG habitat on a landscape basis to avoid segmenting a project. Do this by encouraging operators and claimants to consolidate exploration into a plan of operations to reduce the proliferation of mining notices, in accordance with 43 CFR, Part 3809.21(b).

MD MR 18: Subject to valid existing rights and applicable law, authorize locatable mineral development activity, by approving plans of operation and apply mitigation and best management practices that minimize the loss of PHMAs and GHMAs or that enhance GRSG habitat by applying the “avoid, minimize and compensatory mitigation” process through an applicable mitigation system, such as the Nevada Conservation Credit System and exemplified in the Barrick Nevada Sage-Grouse Bank Enabling Agreement (March 2015).

MD MR 19: Close or mitigate abandoned mine sites in PHMAs and GHMAs to reduce GRSG predation by eliminating physical structures that could provide nesting opportunities and perching sites for predators.

Salable Minerals

MD MR 20: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD MR 21: PHMAs are closed to new mineral material sales (**see Appendix A; Figure 2-6**). However, these areas remain open to free use permits and the expansion of existing active pits, if requirements in MD MR 20 can be met.

MD MR 22: Manage GHMAs as open to existing and new mineral materials disposal sites (**see Appendix A; Figure 2-6**).

MD MR 23: Provide reasonable access and development opportunity to Federal Highway Administration, Nevada Department of Transportation (NDOT), California Department of Transportation (Caltrans), counties, tribes and the public for existing mineral material pits in PHMAs and GHMAs.

Non-Energy Leasable Minerals

MD MR 24: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD MR 25: Manage PHMAs as closed to new non-energy leasable mineral leasing (**see Appendix A; Figure 2-7**).

MD MR 26: Expansion of existing leases will be considered in PHMA for development.

MD MR 27: Manage GHMAs as open to new non-energy leasable mineral leasing (**see Appendix A; Figure 2-7**).

Mineral Split Estate

MD MR 28: Review Objective SSS 4, and to the extent allowed by law, apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat in split estate situations.

MD MR 29: Where the federal government owns the mineral estate in PHMAs and GHMAs, and the surface is in non-federal ownership, apply the same stipulations, conditions of approval (COAs), and/or conservation measures and RDFs applied (consistent with applicable law) if the mineral estate is developed on BLM-administered lands in that management area, to the maximum extent permissible under existing authorities, and in coordination with the landowner.

Action MR 30: Where the federal government owns the surface and the mineral estate is in non-federal ownership in PHMAs and GHMAs, apply appropriate surface use COAs, stipulations, and mineral RDFs (consistent with applicable law) through ROW grants or other surface management instruments, to the maximum extent permissible under existing authorities, in coordination with the mineral estate owner/lessee.

2.2.7 Renewable Energy (Wind and Solar) (RE)

Management Decisions (MD)

Industrial Solar

MD RE 1: Designate PHMAs and GHMAs as ROW exclusion for utility-scale solar energy facilities (those that generate 20 megawatts or more) (see **Appendix A; Figure 2-9**).

MD RE 2: In PHMAs and GHMAs, consider approving solar facilities on existing industrial infrastructure (e.g., a mine site) to generate power on-site. Review Objective SSS 4 and apply MDs SSS 1 through SSS 3 when reviewing and analyzing projects and activities proposed in GRSG habitat. In OHMAs, apply Action SSS 4.

Wind Energy Development

MD RE 3: Designate PHMAs as ROW exclusion for utility-scale commercial wind energy facilities (those that generate 20 megawatts or more) (see **Appendix A; Figure 2-8**).

MD RE 4: Within PHMAs, wind facilities associated with existing industrial infrastructure (e.g., a mine site) to provide on-site power generation could be considered for approval, subject to a net conservation gain. Apply MDs SSS 1 through SSS 2 when reviewing and analyzing projects/activities proposed within GRSG habitat.

MD RE 5: Designate GHMAs as ROW avoidance for utility-scale commercial wind energy facilities (i.e., facilities that generate 20 megawatts or more) (see **Appendix A; Figure 2-8**). Review Objective SSS 4 and apply Actions SSS 1 through SSS 3 when reviewing and analyzing projects/activities proposed within GRSG habitat. In OHMAs apply Action SSS 4.

2.2.8 Lands and Realty (LR)

Objective LR 1: Manage land use authorizations, including ROWs, leases, permits, and tenure adjustments, to maintain or enhance PHMAs and GHMAs and connectivity.

Objective LR 2: Effects of infrastructure projects, including siting, will be minimized using the best available science, and updated as monitoring information on current infrastructure projects becomes available.

*Management Decisions (MD)*Utility Corridors and Communication Sites

MD LR 1: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD LR 2: Only utility corridors identified in **Appendix A, Figure 2-10** remain as designated corridors in PHMAs and GHMAs. All previously designated corridors in PHMAs and GHMAs not shown on the map that were designated through past land use planning efforts have been evaluated and undesignated.

MD LR 3: On public lands, keep the designated corridors identified in **Appendix A, Figure 2-10** in PHMAs and GHMAs available to new uses, subject to a maximum corridor width of 3,500 feet, unless a narrower width is specified in an existing plan, or a different width is specified for congressionally designated corridors.

MD LR 4: When issuing new communication site management plans or amending existing plans, include GRSG habitat objectives (**Table 2-2**). Current authorizations will then be amended to reflect the updated communication site management plans.

Land Use Authorizations

MD LR 5: PHMAs and GHMAs are designated as avoidance areas for high voltage transmission line ROWs (>100 kV) (**see Appendix A; Figure 2-11a**), except for the transmission projects specifically identified below. All authorizations in these areas, other than the identified projects, must comply with the conservation measures outlined in this proposed plan amendment, including the all of the requirements presented in MDs SSS 1 – SSS 4. The BLM is currently processing an application for the TransWest Express transmission line and the NEPA review for this project is well underway. Conservation measures for GRSG are being analyzed through the project's NEPA review process, which should achieve a net conservation benefit for the GRSG.

MD LR 6: PHMAs and GHMAs are designated as major pipeline (≥24-inch diameter) ROW avoidance areas (**see Appendix A; Figure 2-11a**). Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat. In OHMAs, apply MD SSS 4.

MD LR 7: Issue ROWs only after documenting that they will not adversely affect or disrupt GRSG habitat (independent of disturbance cap), except where such limitation will make accessing valid existing rights impracticable in PHMAs and GHMAs.

MD LR 8: Manage PHMAs as avoidance areas for ROWs (including permits and leases) (**see Appendix A; Figure 2-11b**). These do not include the wind, solar, or high-voltage transmission line and major pipeline ROW actions, above.

MD LR 9: Manage GHMAs as open to ROWs (including for permits and leases) (**see Appendix A; Figure 2-11b**). These do not include the wind, solar, or high-voltage transmission line and major pipeline ROW actions, above.

MD LR 10: In PHMAs, bury new distribution power and communication lines in existing disturbed areas, unless it would not be technically feasible or the cost would prohibit the proponent from providing the service. Where burying transmission lines is not feasible, locate new transmission lines next to existing linear disturbances, when possible; additional mitigation will be required.

MD LR 11: When renewing or amending ROWs (including permits and leases), assess the impacts of ongoing use of the ROW on GRSGs and their habitat and minimize such impacts to the extent allowed by law.

MD LR 12: When renewing or amending ROWs that are undeveloped, work with ROW holders to bury or relocate authorized but undeveloped lines to minimize impacts on PHMAs, unless this would not be technically feasible or would be contrary to policy. Where burying transmission lines is not feasible, locate new transmission lines next to existing linear disturbances, when possible.

MD LR 13: In PHMAs and GHMAs where existing ROWs, permits, or leases are no longer in use, coordinate with the authorized holder to relinquish the authorization and reclaim the site by removing the infrastructure.

MD LR 14: Stipulate site relinquishment and reclamation in all new, amended or renewed ROWs, permits, and leases.

MD LR 15: In PHMAs and GHMAs, site new linear features in designated corridors, as identified in **Appendix A, Figure 2-10**, or at a minimum, collocate with existing linear features. Construct new ROWs in designated corridors as close as technically feasible to existing linear ROW infrastructure to limit disturbance to the smallest footprint.

MD LR 16: Manage landfills and transfer stations on public lands to eliminate opportunities to attract and provide nesting, cover, or perches for predators.

MD LR 17: Within 4 miles of active and pending leks in GRSG habitat, require ROW, permit, and lease holders to retrofit those portions of power lines and other utility structures with nesting and perch-detering devices. Do this during the renewal and amendment process if adverse effects, such as increased nest predation, on GRSG populations have been documented. This requirement shall be predicated on research and monitoring studies specific to power lines or other utility structures.

MD LR 18: In PHMAs and subject to valid existing rights, authorize new road ROWs only when necessary for public safety or administrative access, or if it will create no new surface disturbance.

MD LR 19: In PHMAs and GHMAs, address access to valid existing rights to provide the minimum access necessary to exercise the right and maintain or enhance PHMAs and GHMAs.

MD LR 20: Consider the likelihood of development of not-yet-constructed surface-disturbing activities – as defined in Table 2 of the Monitoring Framework (**Appendix D**)—under valid existing rights prior to authorizing new projects in PHMA.

Land Tenure

MD LR 21: Lands classified as PHMAs and GHMAs for GRSG will be retained in federal management, unless: (1) the agency can demonstrate that disposal of the lands, including land exchanges, will provide a net conservation gain to GRSG or (2) the agency can demonstrate that the disposal, including land exchanges, of the lands will have no direct or indirect adverse impact on conservation of the GRSG (see **Appendix A; Figure 2-12**).

MD LR 22: Where significant conservation actions can be achieved in PHMAs and GHMAs, seek to acquire lands with intact subsurface mineral estate by donation, purchase, or exchange in order to best conserve, enhance, or restore GRSG habitat.

MD LR 23: Manage lands acquired by exchange, purchase or easement as either PHMAs or GHMAs, in consideration of surrounding habitat.

Withdrawals

MD LR 24: Recommend SFA for withdrawal from the General Mining Act of 1872, as amended; subject to valid existing rights (see **Appendix A; Figure 2-5**).

2.2.9 Recreation and Visitor Services (REC)

Management Decisions (MD)

MD REC 1: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when analyzing projects and activities proposed in GRSG habitat.

MD REC 2: Allow special recreation permits in PHMAs and GHMAs only if their effects on GRSG and its habitat are neutral or result in a net conservation gain.

MD REC 3: In PHMA, do not construct new recreation facilities (e.g., campgrounds, trails, trailheads, staging areas) unless the development will have a net conservation gain to GRSG and its habitat (such as concentrating recreation, diverting use away from critical areas, etc.), or unless the development is required for visitor health and safety or resource protection.

MD REC 4: Develop trail mapping and educational campaigns in PHMAs and GHMAs to reduce recreational impacts on GRSG and their habitat, including the effects of cross-country travel.

2.2.10 Travel and Transportation (TTM)

Management Decisions (MD)

Objective TTM 1: Prioritize and complete transportation planning in PHMAs and GHMAs that provides for reasonable access to public lands for administration and recreation and that minimizes proliferation of user-created routes (e.g., roads, primitive roads, and trails).

MD TTM 1: Review Objective SSS 4 and apply MDs SSS 1 through SSS 4 when reviewing and analyzing projects and activities proposed in GRSG habitat.

MD TTM 2: In areas where travel planning has not been completed, limit off-highway vehicle (OHV) travel to existing routes in PHMAs and GHMAs (subject to valid existing rights, such as for a mine under

a plan of operations) until subsequent implementation-level travel planning is completed and a designated route system is established. In travel management plans that have been completed and are being implemented (e.g., northeastern California plans), continue to limit OHV travel to designated routes in PHMAs and GHMAs (see **Appendix A; Figure 2-13**).

MD TTM 3: Allow the goals, objectives, and actions in relevant national OHV guidance to guide subsequent implementation-level travel planning efforts. In addition, the following guidelines will be considered when undertaking future implementation-level travel planning:

- Identify, prioritize, and update annually a timeline to complete travel planning in all relevant planning areas to accelerate data collection, route evaluation and selection, and on-the-ground implementation, including signing, monitoring, and rehabilitation.
- Consult with interested user groups, federal, state, county, and local agencies, local landowners, and other parties to provide an opportunity for the public to express itself and have its views considered. Consequently, incorporate a public outreach plan to fully engage all interested stakeholders into future travel management plans.
- Among other route evaluation criteria, incorporate criteria from 43 CFR, Part 8342.1, and specifically section (b), “areas and trails shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats. Special attention will be given to protect endangered or threatened species and their habitats.”
- Evaluate all routes to determine the purpose and need and the potential resource or user conflicts from motorized travel. Where resource or user conflicts outweigh the purpose and need for the route, consider closing the route or relocating it outside of PHMAs and GHMAs. Evaluate for administrative access only routes not required for public access or recreation against current administrative/agency purpose or need.
- Consider closing routes that are duplicative, parallel, or redundant.
- Consider seasonal restrictions (see Actions SSS 2 and SSS 3) on motorized travel use PHMAs and GHMAs where motorized vehicle use is a threat. Consider limiting over snow vehicles (OSVs) designed for use on a track or tracks or a ski or skis, while in use to designated routes or consider seasonal closures in GRSG wintering areas from November 1 through February 28.
- Consider the need for restricting motorized vehicles, including their sound levels (Actions SSS 2 and SSS 3), speed and design (e.g., motorcycles, ATVs, and UTVs).
- Consider scheduling road maintenance to avoid disturbance during sensitive GRSG life-cycle periods to the extent practicable. Consider using time of day, seasonal, and noise restrictions (see Actions SSS 2 and SSS 3) to reduce impacts on GRSG seasonal habitat.
- In PHMAs and GHMAs, close to motorized travel those roads, primitive roads, and trails not designated in travel management plans.
- In PHMAs and GHMAs, prioritize restoring routes not designated in a travel management plan. Obliterate and seed roads, primitive roads, and trails not designated in travel management plans, with appropriate seed mixes and transplanted sagebrush when

applicable. Use fire-resistant species as fuel breaks where appropriate. Seed must be certified weed free.

MD TTM 4: In PHMAs and GHMAs, where new roads are necessary for public safety, administration, or public need, consider limiting route construction to realignments of existing routes where possible.

MD TTM 5: In PHMAs and GHMAs, work with local governments to minimize upgrading existing routes that will change route category (e.g., road, primitive road, or trail) or capacity, unless the upgrade will maintain or enhance GRSG habitat, provide a fuel break to protect native vegetation, will be necessary for public safety, or will eliminate the need to construct a new road.

MD TTM 6: In PHMAs and GHMAs, temporary closures will be considered in accordance with 43 CFR, Subpart 8364 (Closures and Restrictions), 43 CFR, Subpart 8351 (Designated National Area), 43 CFR, Subpart 6302 (Use of Wilderness Areas, Prohibited Acts, and Penalties), and 43 CFR, Subpart 8341 (Conditions of Use).

Temporary closure or restriction orders under these authorities are enacted at the discretion of the authorized officer to resolve management conflicts and protect persons, property, and public lands and resources. where an authorized officer determines that off-highway vehicles are causing or will cause considerable adverse effects upon soil, vegetation, wildlife, wildlife habitat, cultural resources, historical resources, threatened or endangered species, wilderness suitability, other authorized uses, or other resources, the affected areas shall be immediately closed to the type(s) of vehicle causing the adverse effect until the adverse effects are eliminated and measures implemented to prevent recurrence (43 CFR, Part 8341.2). A closure or restriction order shall be considered only after other management strategies and alternatives have been explored. The duration of temporary closure or restriction orders shall be limited to 24 months or less; however, certain situations may require longer closures and/or iterative temporary closures. This may include closure of routes or areas.

2.2.11 Cultural Resources (CUL)

Management Decisions (MD)

MD CUL 1: Do not restrict tribal access to view GRSG breeding behavior for a tribe's traditional lifeways.

MD CUL 2: Do not prohibit tribal access to traditional locations for cultural practices in PHMAs and GHMAs.

MD CUL 3: Do not prohibit tribal collection of seeds, vegetation, or medicinal plants related to traditional cultural practices in PHMAs and GHMAs.

2.2.12 Mitigation (MI)

(Also see **Appendix F**)

Management Decisions (MD)

MD MIT 1: In Nevada, coordinate with the SETT on the application of a compensatory mitigation program, such as the Nevada Conservation Credit System (CCS) (**Appendix N**) for mitigating activities that result in habitat loss and degradation of GRSG habitat in Nevada, where the application of

compensatory mitigation will occur on or the credit will be applied to disturbance on BLM-administered lands.

MD MIT 2: Identify compensatory mitigation areas in PHMAs and GHMAs with the potential to achieve GRSg habitat objectives (**Table 2-2**), in accordance with FIAT, the SFA prioritization, and the State of Nevada Strategic Action Plan.

CHAPTER 3

CONSULTATION, COORDINATION, AND PUBLIC INVOLVEMENT

The BLM land use planning activities are conducted in accordance with NEPA requirements, CEQ regulations, and Department of the Interior and BLM policies and procedures implementing NEPA. The NEPA and associated laws, regulations, and policies require the BLM to seek public involvement early in and throughout the planning process. Public involvement and agency consultation and coordination, which have been at the heart of the planning process leading to this ARMPA, were achieved through *Federal Register* notices, public and informal meetings, individual contacts, media releases, planning bulletins, and the Nevada GRSG website (http://www.blm.gov/co/st/en/BLM_Programs/wildlife/sage-grouse.html).

3.1 CONSULTATION AND COORDINATION

The BLM collaborated with numerous agencies, municipalities, and tribes throughout the preparation of this ARMPA. The BLM outreach and collaboration with cooperating agencies are described in Chapter 6 of the Proposed RMPA and Final EIS. Twenty-four agencies⁴ accepted the offer to participate in the BLM planning process as cooperating agencies. The BLM formally invited them to participate in developing the alternatives for the RMPA and EIS and to provide data and other information related to their agency responsibilities, goals, mandates, and expertise.

3.1.1 Section 7 Consultation

In accordance with Section 7 of the Endangered Species Act of 1973 (ESA), as amended, the BLM on February 8, 2005, requested a species list from the USFWS of any federally listed, federally proposed, or current federal candidate species that may be present in the RMP planning area. It also requested updated species lists on March 25, 2010, August 27, 2007, and January 26, 2012. The most recent list (USFWS 2012) can be found in **Appendix K** in the Informal Consultation memo from the USFWS. The

⁴ The Counties of Churchill, Elko, Eureka, Humboldt, Lander, Lassen, Lincoln, Modoc, Nye, Pershing, Storey, Washoe, and White Pine; the Nevada Department of Transportation, Nevada Department of Wildlife, and California Division of Natural Resources; the Federal Highway Administration, Natural Resources Conservation Service, USFWS, and Forest Service; and the Pyramid Lake Paiute Tribe, Summit Lake Paiute Tribe, Susanville Indian Rancheria, and the Washoe Tribe.

BLM initiated informal consultation with the USFWS under Section 7 of the ESA on March 9, 2012, which was completed on July 14, 2015, when the USFWS provided a concurrence letter for informal consultation. The letter state that the Proposed Plan “may affect, but is not likely to adversely affect Webber’s ivesia or its critical habitat” and that all other listed species in the project area were a “no effect” from the Proposed Plan.

3.1.2 Native American Consultation

In accordance with FLPMA and BLM guidance and throughout the planning process, the BLM consulted Native American representatives for the RMPA planning process. Coordination with Native American tribes. All Native American tribes and organizations with interests in the planning area were contacted by mail and were encouraged to be cooperating agencies. Tribes have been participating in the RMPA/EIS process through meetings and other contacts.

On July 12, 2010, the BLM sent a request for a consultation meeting and copies of the RMP to the following tribes and reservations:

- Battle Mountain Band
- Burns Paiute Tribe
- Cedarville Rancheria
- Confederate Tribes of Warm Springs
- Fallon Paiute Shoshone Paiute Tribe
- Fort Bidwell Tribe
- Fort McDermitt Paiute and Shoshone Tribe
- Klamath Indian Tribe
- Lovelock Paiute Tribe
- Pit River Tribe
- Pyramid Lake Paiute Tribe
- Reno-Sparks Indian Colony
- Shoshone-Bannock Tribes
- Shoshone-Paiute Tribes of Duck Valley
- Summit Lake Paiute Tribe
- Walker River Paiute Tribe
- Washoe Tribe
- Winnemucca Indian Colony
- Yerrington Paiute Tribe
- Yomba Reservation

The BLM also sent a copy to the Inter-Tribal Council of Nevada.

Consultation meetings to discuss the RMP occurred with the Fort McDermitt Paiute and Shoshone Tribe in September and December 2012 and with the Summit Lake Paiute Tribe in October 2012. Other tribes declined or did not respond to the BLM's requests for consultation. An additional Native American consultation meeting was held in July 2012.

As part of the NEPA scoping and consultation process and as an opportunity to provide comment, in accordance with Section 106 of the NHPA, the BLM notified the Nevada and California State Historic Preservation Officers (SHPO) for information on concerns with historic properties and land use planning direction included in these ARMPA. The BLM sought information about historic properties in consideration of land use planning decisions included in this ARMPA, in accordance with the National Programmatic Agreement between the BLM, the Advisory Council on Historic Preservation, and National Conference of State Historic Preservation Officers and the Nevada and California State Protocol Agreement between the BLM and the SHPO. The BLM incorporated the information it received from SHPOs and tribes into the proposed RMPAs and considered such information in making the land use plan amendment decisions. The BLM has met its obligations under Section 106 of the NHPA, 54 USC, Section 306108, as outlined in the National Programmatic Agreement and the state protocols.

3.2 PUBLIC INVOLVEMENT

The public involvement process, consultation, and coordination conducted for the RMP are described in Chapter 6 of the Proposed RMP and Final EIS. As required by regulation, public scoping meetings were conducted following the publication in the *Federal Register* on December 9, 2011, of the Notice of Intent to prepare an EIS. A Notice of Availability (NOA) for the Draft RMPA/EIS was published in the *Federal Register* on November 1, 2013, initiating a 90-day public comment period.

In 2013, the BLM held the following public comment open houses for the Draft RMPA/EIS:

- December 3 in Cedarville, California
- December 4 in Susanville, California
- December 5 in Reno, Nevada
- December 9 in Tonopah, Nevada
- December 10 in Ely, Nevada
- December 11 in Elko, Nevada
- December 12 in Winnemucca, Nevada

All meetings were from 5:30 to 7:30 p.m. The comments received on the Draft RMPA and EIS and BLM's responses were summarized in **Appendix C** of the Proposed RMP and Final EIS.

The NOA for the Proposed RMP and Final EIS was published on May 29, 2015, initiating a 30-day public protest period and a 60-day governors consistency review period. The 30-day protest period ended on June 29, 2015. Forty protest letters were received, all but two of which had valid protest points; all protests were resolved before the record of decision (ROD) was signed.

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CHAPTER 4

PLAN IMPLEMENTATION

4.1 IMPLEMENTING THE PLAN

After a BLM RMP or an RMP amendment is approved, implementation is a continuous and active process. Management decisions can be characterized as *immediate* or *one-time future* decisions.

Immediate Decisions—These decisions are the land use planning decisions that go into effect when the ROD is signed. These include goals, objectives, allowable uses, and management direction, such as the allocation of lands as open or closed for salable mineral sales, lands open with stipulations for oil and gas leasing, and OHV area designations. These decisions require no additional analysis and guide future land management actions and subsequent site-specific implementation decisions in the planning area. Proposals for future actions such as oil and gas leasing, land adjustments, and other allocation-based actions will be reviewed against these land use plan decisions to determine if the proposal conforms with the plan.

One-Time Future Decisions—These types of decisions are those that are not implemented until additional decision-making and site-specific analysis is completed. Examples are implementation of the recommendations to withdraw lands from locatable mineral entry and development of travel management plans. One-time future decisions require additional analysis and decision-making and are prioritized as part of the BLM budget process. Priorities for implementation of one-time RMP decisions will be based on the following criteria:

- National BLM management direction
- Available resources

General Implementation Schedule of One-Time Decisions—Future Decisions discussed in this ARMPA will be implemented over a period of years, depending on budget and staff availability. After issuing the ROD, the BLM will prepare implementation plans that establish tentative time frames for completion of one-time decisions identified in the ARMPA. These actions require additional site-specific decision-making and analysis.

This schedule will assist BLM managers and staff in preparing budget requests and in scheduling work. However, the proposed schedule must be considered tentative and will be affected by future funding, nondiscretionary workloads, and cooperation by partners and the public. Yearly review of the plan will provide consistent tracking of accomplishments and information that can be used to develop annual budget requests to continue implementation.

4.2 MAINTAINING THE PLAN

The ARMPA can be maintained as necessary to reflect minor changes in data. Plan maintenance is limited to further refining or documenting a previously approved decision incorporated in the plan or clarifying previously approved decisions.

The BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data or support new management techniques, best management practices, and scientific principles. Where monitoring shows that land use plan actions or best management practices are not effective, plan maintenance or plan amendment may begin, as appropriate. Plan maintenance will be documented in supporting records; plan maintenance does not require formal public involvement, interagency coordination, or the NEPA analysis required for making new land use plan decisions.

4.3 CHANGING THE PLAN

The ARMPA may be changed, should conditions warrant, through a plan amendment or revision process. A plan amendment may become necessary if major changes are needed or to consider a proposal or action that does not conform with the plan. The results of monitoring, evaluating new data, making policy changes, and changing public needs might also provide a need for a plan amendment. If several areas of the plan become outdated or otherwise obsolete, a plan revision may become necessary. Plan amendments and revisions are accomplished with public input and the appropriate level of environmental analysis conducted according to the CEQ procedures for implementation of NEPA.

4.4 PLAN EVALUATION, MONITORING, AND ADAPTIVE MANAGEMENT

Plan evaluation is the process by which the plan and monitoring data are reviewed to determine if management goals and objectives are being met and if management direction is sound. Land use plan evaluations determine if decisions are being implemented, if mitigation measures are satisfactory, if there are significant changes in the related plans of other entities, if there is new data of significance to the plan, and if decisions should be modified via amendment or revision. Monitoring data gathered over time is examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why not. Conclusions are then used to make recommendations on whether to continue current management or to identify what changes need to be made in management practices to meet objectives.

The BLM will use land use plan evaluations to determine if the decisions in the ARMPA, supported by the accompanying NEPA analysis, are still valid in light of new information and monitoring data. Evaluations will follow the protocols established by the BLM Land Use Planning Handbook (H-1601-1) or other appropriate guidance in effect at the time the evaluation is initiated. The monitoring framework for this ARMPA can be found in **Appendix D**.

The ARMPA also includes an adaptive management strategy, which has soft and hard triggers and responses. These triggers are not specific to any particular project but instead identify habitat and population thresholds. Triggers are based on the two key metrics that are being monitored during the life of the ARMPA: habitat loss and population declines.

Soft triggers represent an intermediate threshold, indicating that management changes are needed at the implementation level to address habitat or population losses. If a soft trigger is tripped during the life of the plans, the BLM's response is to apply more conservative or restrictive conservation measures to mitigate for the specific cause of the decline of populations or habitats, with consideration of local knowledge and conditions.

These adjustments will be made to preclude tripping a hard trigger, which signals more severe habitat loss or population declines. Hard triggers represent a threshold, indicating that immediate plan-level action is necessary to stop a severe deviation from GRSG conservation objectives set forth in the ARMPA.

If new scientific information becomes available, demonstrating that the hard-wired response would be insufficient to stop a severe deviation from the ARMPA's GRSG conservation objectives, the BLM would implement interim management direction to ensure that conservation options are not foreclosed. The BLM would also undertake any appropriate plan amendments or revision if necessary.

More information on the ARMPA's adaptive management strategy can be found in **Appendix J** and outlined in the adaptive management direction in **Section 2.2** of this ARMPA.

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CHAPTER 5

GLOSSARY

2008 WAFWA Sage-Grouse Memorandum of Understanding (MOU). A MOU between the Western Association of Fish and Wildlife Agencies (WAFWA), the Forest Service, the BLM, the USFWS, the US Geological Survey, the Natural Resources Conservation Service, and the US Department of Agriculture, Farm Service Agency. The purpose of the MOU is to provide for cooperation between the participating state and federal land, wildlife management, and science agencies in the conservation and management of sage-grouse (*Centrocercus urophasianus*) sagebrush (*Artemisia* spp.) habitats and other sagebrush-dependent wildlife throughout the western United States and Canada and a commitment of all agencies to implement the 2006 WAFWA Conservation Strategy.

Acquisition. Lands can be acquired to facilitate various resource management objectives. Acquisitions, including easements, can be completed through exchange, Land and Water Conservation Fund purchases, donations, or receipts from the Federal Land Transaction Facilitation Act sales or exchanges.

Activity plan. A type of implementation plan (see *Implementation plan*), this usually describes multiple projects and applies best management practices to meet land use plan objectives. Examples of activity plans are interdisciplinary management plans, habitat management plans, recreation area management plans, and grazing plans.

Actual use. The amount of animal unit months consumed by livestock based on the numbers of livestock and grazing dates submitted by the livestock operator and confirmed by periodic field checks by the BLM.

Adaptive management. A type of natural resource management in which decisions are made as part of an ongoing science-based process. Adaptive management involves testing, monitoring, and evaluating applied strategies and incorporating new knowledge into management approaches that are based on scientific findings and the needs of society. Results are used to modify management policy, strategies, and practices.

Additionality. The conservation benefits of compensatory mitigation are demonstrably new and would not have resulted without the compensatory mitigation project (BLM Manual Section 1794).

Administrative access. A term used to describe access for resource management and administrative purposes, such as fire suppression, cadastral surveys, permit compliance, law enforcement and military in the performance of their official duty, or other access needed to manage BLM-administered or National Forest System lands or uses.

Allotment. An area of land in which one or more livestock operators graze their livestock. Allotments generally consist of BLM-administered lands or National Forest System lands but may include other federally managed, state-owned, or private lands. An allotment may include one or more separate pastures. Livestock numbers and periods of use are specified for each allotment.

Allotment management plan (AMP). A concisely written program of livestock grazing management, including supportive measures if required, designed to attain specific, multiple-use management goals in a grazing allotment. An AMP is prepared in consultation with the permittees, lessees, and other affected interests. Livestock grazing is considered in relation to other uses of the range and to renewable resources, such as watersheds, vegetation, and wildlife. An AMP establishes seasons of use, the number of livestock to be permitted, the range improvements needed, and the grazing system.

Amendment. The process for considering or making changes in the terms, conditions, and decisions of approved resource management plans or management framework plans.

Animal unit month. The amount of forage necessary to sustain one cow or its equivalent for one month.

Anthropogenic disturbances. Human-created features that include paved highways, graded gravel roads, transmission lines, substations, wind turbines, oil and gas wells, geothermal wells and associated facilities, pipelines, landfills, agricultural conversion, homes, and mines.

Aquatic. Living or growing in or on the water.

Area of Critical Environmental Concern (ACEC). Special area designation, established through the BLM's land use planning process (43 CFR, Part 1610.7-2), where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards. The level of allowable use within an ACEC is established through the collaborative planning process. Designation of an ACEC allows for resource use limitations in order to protect identified resources or values.

Arid (shrub condition). Sites with mean annual precipitation of less than 10 inches.

Attainment area. A geographic area in which levels of a criteria air pollutant meet the health-based National Ambient Air Quality Standard for that specific pollutant.

Authorized/authorized use. This is an activity (i.e., resource use) occurring on public lands that is both explicitly or implicitly recognized and legalized by law or regulation. This term may refer to those activities on public lands for which the BLM, Forest Service, or other appropriate authority has issued a formal authorization document, such as a livestock grazing lease/permit, right-of-way grant, coal lease, or

oil and gas permit to drill. Formally authorized uses typically involve some type of commercial activity, facility placement, or event. These formally authorized uses are often limited in time or area. Unless constrained or bound by statute, regulation, or an approved land use plan decision, legal activities involving public enjoyment and use of public lands, for example, hiking, camping, and hunting, require no formal BLM or Forest Service authorization.

Avoidance/avoidance area. These terms usually address mitigation of some activity (i.e., resource use). Paraphrasing the CEQ regulations (40 CFR, Part 1508.20), avoidance means to circumvent or bypass an impact altogether by not taking a certain action or parts of an action. Therefore, avoidance does not necessarily prohibit a proposed activity, but it may require the relocation of an action, or the total redesign of an action to eliminate any potential impacts resulting from it. Also see the definition of *right-of-way avoidance area*.

Avoidance mitigation. Avoiding the impact altogether by not taking a certain action or parts of an action (40 CFR, Part 1508.20[a]), for example, avoiding the impact by moving the proposed action to a different time or location.

Baseline. The preexisting condition of a defined area or resource that can be quantified by an appropriate measurement. During environmental reviews, the baseline is considered the affected environment that exists at the time of the review's initiation and is used to compare predictions of the effects of the proposed action or a reasonable range of alternatives.

Best management practices (BMPs). A suite of techniques that guide or may be applied to management actions to aide in achieving desired outcomes. BMPs are often developed in conjunction with land use plans, but they are not considered a planning decision unless the plans specify that they are mandatory.

Biologically significant unit. Delineation of GRSG habitat based on GRSG interactions between population management units to represent local GRSG population habitat and use areas within the subregion.

BLM sensitive species. Those species that are not federally listed as endangered, threatened, or proposed under the Endangered Species Act but that are designated by the BLM State Director under 16 USC, Section 1536(a)(2), for special management consideration. By national policy, federally listed candidate species are automatically included as sensitive species. Sensitive species are managed so they will not need to be listed as proposed, threatened, or endangered under the Endangered Species Act.

Breeding habitat. Leks and the sagebrush habitat surrounding leks that are collectively used for pre-laying, breeding, nesting, and early brood-rearing, from approximately March through June (Connelly et al. 2004).

Candidate species. Taxa for which the USFWS has sufficient information on their status and threats to propose the species for listing as endangered or threatened under the Endangered Species Act, but for which issuing a proposed rule is currently precluded by higher priority listing actions. Separate lists for plants, vertebrate animals, and invertebrate animals are published periodically in the *Federal Register* (BLM Manual 6840, Special Status Species Manual).

Casual use. This refers to activities ordinarily resulting in no or negligible disturbance of the public lands, resources, or improvements. For examples for rights-of-way see 43 CFR, Part 2801.5; for examples for locatable minerals, see 43 CFR, Part 3809.5.

Categorical exclusion. Actions (identified in agency guidance) that do not individually or cumulatively have a significant effect on the human environment and for which neither an environmental assessment nor an environmental impact statement is required (40 CFR, Part 1508.4) but a limited form of NEPA analysis is performed.

Chemical vegetation treatment. Application of herbicides to control invasive species/noxious weeds or unwanted vegetation. To meet resource objectives, the preponderance of chemical treatments would be used in areas where cheatgrass or noxious weeds have invaded sagebrush steppe.

Climate change. Any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for decades or longer. Climate change may result from and of the following:

- Natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun
- Natural processes within the climate system, such as changes in ocean circulation
- Human activities that change the atmosphere's composition, such as driving automobiles, and the land surface, such as deforestation, reforestation, urbanization, and desertification

Closed area. An area where off-road vehicle use is prohibited. Use of off-road vehicles in closed areas may be allowed for certain reasons; however, such use would be made only with the approval of the BLM Authorized Officer (43 CFR, Part 8340.0-5 (h)).

Collaboration. A cooperative process in which interested parties, often with widely varied interests, work together to seek solutions with broad support for managing public and other lands. Collaboration may take place with any interested parties, whether or not they are cooperating agencies.

Communication site. Sites that include broadcast-type uses, such as television, AM/FM radio, cable television, and broadcast translator, and non-broadcast uses, such as commercial or private mobile radio service, cellular telephone, microwave, local exchange network, and passive reflectors.

Compensatory mitigation. Compensating for the (residual) impact by replacing or providing substitute resources or environments (40 CFR, Part 1508.20).

Compensatory mitigation projects. Specific, on-the-ground actions to improve or protect habitats, such as chemical vegetation treatments, land acquisitions, and conservation easements.

Compensatory mitigation sites. The durable areas where compensatory mitigation projects will occur.

Comprehensive trails and travel management (travel management). The proactive interdisciplinary planning, this is on-the-ground management and administration of travel networks (both motorized and nonmotorized) to ensure that public access, natural resources, and regulatory needs are considered. It consists of inventory, planning, designation, implementation, education, enforcement,

monitoring, easement acquisition, mapping and signing, and other measures necessary to provide access to public lands for a variety of uses, such as recreational, traditional, casual, agricultural, commercial, educational, aeronautical, and other purposes.

Condition class (fire regime). This is a measure describing the degree of departure from historical fire regimes, possibly resulting in alterations of key ecosystem components, such as species composition, structural stage, stand age, canopy closure, and fuel loadings. One or more of the following activities may have caused this departure: fire suppression, timber harvesting, livestock grazing, introduction and establishment of exotic plant species, insects, or disease, or other management activities.

Conditions of approval. Additional requirements associated with an approved application for permit to drill for a federal leasable mineral to ensure environmental protection, safety, or conservation of the mineral resource.

Conformance. Conformance means that a proposed action would be specifically provided for in the land use plan or, if not specifically mentioned, would be clearly consistent with the goals, objectives, or standards of the approved land use plan.

Conservation measures. Measures to conserve, enhance, or restore GRS habitat by reducing, eliminating, or minimizing threats.

Conservation plan. The recorded decisions of landowners or operators, cooperating with a conservation district, on how the landowners or operators plan, within practical limits, to use their land according to its capability and to treat it according to its needs for maintenance or improvement of the soil, water, animal, plant, and air resources.

Conservation strategy. A strategy outlining current activities or threats that are contributing to the decline of a species, along with the actions or strategies needed to reverse or eliminate such a decline or threat. Conservation strategies are generally developed for species of plants and animals that are designated as BLM sensitive species or that have been determined by the USFWS or National Oceanographic and Atmospheric Administration-Fisheries to be federal candidates under the ESA.

Controlled surface use. This is a category of moderate constraint stipulations that allows some use and occupancy of public land, while protecting identified resources or values and is applicable to fluid mineral leasing and all activities associated with fluid mineral leasing, such as truck-mounted drilling and geophysical exploration equipment off designated routes, and construction of wells or pads. CSU areas are open to fluid mineral leasing, but the stipulation allows the BLM to require special operational constraints, or the activity can be shifted more than 656 feet to protect the specified resource or value.

Cooperating agency. Assists the lead federal agency in developing an environmental assessment or environmental impact statement. This can be any agency with jurisdiction by law or special expertise for proposals covered by NEPA (40 CFR, Part 1501.6). Any tribe or federal, state, or local government jurisdiction with such qualifications may become a cooperating agency by agreement with the lead agency.

Compensatory mitigation. Compensating for the (residual) impact by replacing or providing substitute resources or environments (40 CFR, Part 1508.20).

Compensatory mitigation projects. Specific, on-the-ground actions to improve or protect habitats, such as chemical vegetation treatments, land acquisitions, and conservation easements.

Compensatory mitigation sites. The durable areas where compensatory mitigation projects will occur.

Council on Environmental Quality. An advisory council to the president, established by NEPA. It reviews federal programs to analyze and interpret environmental trends and information.

Cultural resources. Locations of human activity, occupation, or use. Cultural resources are archaeological, historical, or architectural sites, structures, or places with important public and scientific uses and locations of traditional cultural or religious importance to specified social or cultural groups.

Cumulative effects. The direct and indirect effects of a proposed project alternative's incremental impacts when they are added to other past, present, and reasonably foreseeable actions, regardless of who carries out the action.

Decibel. A unit used to express the intensity of a sound wave, equal to 20 times the common logarithm of the ratio of the pressure produced by the sound wave to a reference pressure, usually 0.0002 microbar.

Decision area. Public lands and mineral estate within the planning area that are encompassed by GRSG designated habitat, which includes PHMA, GHMA, and OHMA.

Deferred/deferred use. To set aside or postpone a particular resource use or activity on the public lands to a later time. Generally, when this term is used, the period of the deferral is specified. Deferments sometimes follow the sequence time frame of associated serial actions; for example, action B will be deferred until action A is completed.

Designated roads and trails. Specific roads and trails identified by the BLM where some type of motorized/nonmotorized use is appropriate and allowed, either seasonally or year-long (H-1601-1, BLM Land Use Planning Handbook).

Desired future condition. For rangeland vegetation, the condition of rangeland resources on a landscape scale that meet management objectives. It is based on ecological, social, and economic considerations during the land planning process. It is usually expressed as ecological status or management status of vegetation (species composition, habitat diversity, and age and size class of species) and desired soil qualities (soil cover, erosion, and compaction). In a general context, desired future condition is a portrayal of the land or resource conditions that are expected to result if goals and objectives are fully achieved.

Desired outcomes. A type of land use plan decision expressed as a goal or objective.

Direct impacts. Direct impacts are caused by an action or implementation of an alternative and occur at the same time and place.

Disposal lands. Transfer of public land out of federal ownership to another party through sale, exchange, Recreation and Public Purposes Act of 1926, Desert Land Entry, or other land statutes.

Distribution line. An electrical utility line with a capacity of less than 100 kilovolts or a natural gas, hydrogen, or water pipeline less than 24 inches in diameter.

Diversity. The relative abundance of wildlife species, plant species, communities, habitats, or habitat features per unit of area.

Drought. A prolonged chronic shortage of water, as compared to the norm, often associated with high temperatures and winds during spring, summer, and fall. A period without precipitation during which the soil water content is reduced to such an extent that plants suffer from lack of water (Bedell 1998).

Durability (protective and ecological). The administrative, legal, and financial assurances that secure and protect the conservation status of a compensatory mitigation site and the ecological benefits of a compensatory mitigation project for at least as long as the associated impacts persist.

Early brood-rearing habitat. Sagebrush habitat within the vicinity of the nest used by GRSG hens with chicks up to three weeks following hatch (Connelly et al. 2000a).

Easement. A right afforded a person or agency to make limited use of another's real property for access or other purposes.

Ecological site. A distinctive kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation.

Emergency stabilization. Planned actions to stabilize and prevent unacceptable degradation to natural and cultural resources, to minimize threats to life and property resulting from the effects of a fire, or to repair/replace/construct physical improvements necessary to prevent degradation of land or resources. Emergency stabilization actions must be taken within one year following containment of a wildland fire.

Endangered species. Any species that is in danger of extinction throughout all or a significant portion of its range. Under the Endangered Species Act in the United States, endangered status is more protective than threatened status. Designation as endangered (or threatened) is determined by the USFWS, as directed by the Endangered Species Act (16 USC. Sections 1531-1544).

Endangered Species Act of 1973 (as amended). Designed to protect critically imperiled species from extinction as a consequence of economic growth and development untempered by adequate concern and conservation. The ESA is administered by two federal agencies, the USFWS and the National Oceanic and Atmospheric Administration. Its purpose is to protect species and also the ecosystems they depend on (16 USC, Sections 1531-1544).

Enhance. The improvement of habitat by increasing missing or modifying unsatisfactory components or attributes of the plant community to meet GRSG objectives.

Environmental impact statement. A detailed statement prepared by the responsible official in which a major federal action that significantly affects the quality of the human environment is described, alternatives to the proposed action are provided, and effects are analyzed.

Evaluation (plan evaluation). The process of reviewing the land use plan and the periodic plan monitoring reports to determine whether the land use plan decisions and NEPA analysis are still valid and whether the plan is being implemented.

Exchange. A transaction whereby the federal government receives land or interests in land in exchange for other land or interests in land.

Exclusion areas. An area on the public lands where a certain activity is prohibited to ensure protection of other resource values on the site. The term is frequently used in reference to lands/realty actions and proposals, such as rights-of-way, but it is not unique to lands and realty program activities. This restriction is functionally analogous to the phrase “no surface occupancy” used by the oil and gas program and is applied as an absolute condition to those affected activities. The less restrictive analogous term is avoidance area. Also see the *right-of-way exclusion area* definition.

Existing routes. These are defined as those routes on the ground that clearly show prior use to the extent that a clear path is visible with no vegetation on it, or in some cases there is little vegetation in the center of the travel path. A single set of vehicle tracks does not make an existing route.

Exploration. Active drilling and geophysical operations to determine the presence of the mineral resource or to determine the extent of the reservoir or mineral deposit.

Facility, energy or mining. Human-constructed assets designed and created to serve a particular function and to afford a particular convenience or service that is affixed to a specific locations, such as oil and gas well pads and associated infrastructure.

Federal Land Policy and Management Act of 1976. Public Law 94-579, October 21, 1976, often referred to as the BLM’s “organic act,” which provides most of the BLM’s legislated authority, direction policy, and basic management guidance.

Federal mineral estate. Subsurface mineral estate owned by the United States and administered by the BLM. Federal mineral estate under BLM jurisdiction is composed of mineral estate underlying BLM-administered lands, privately owned lands, and state-owned lands.

Fire frequency. A general term referring to the recurrence of fire in a given area over time.

Fire intensity. A general term relating to the heat energy released in a fire; the amount and rate of surface fuel consumption.

Fire management plan. A plan that identifies and integrates all wildland fire management and related activities within the context of approved land/resource management plans. It defines a program to manage wildland fires (wildfire, prescribed fire, and wildland fire use). The plan is supplemented by operational plans including preparedness plans, dispatch plans, and prevention plans. Fire management plans ensure that wildland fire management goals and components are coordinated.

Fire severity. The effects of fire on ecological processes, soil, flora, and fauna; the degree to which a community has been altered or disrupted by fire.

Fire suppression. All work and activities connected with control and fire-extinguishing operations, beginning with discovery and continuing until the fire is completely extinguished.

Fluid minerals. Oil, gas, coal bed natural gas, and geothermal resources.

Forage. All browse and herbaceous foods that are available to grazing animals.

Forage base. The amount of vegetation available for wildlife and livestock use.

Fragile soils. Soils having a shallow depth to bedrock, minimal surface layer of organic material, textures that are more easily detached and eroded, or are on slopes over 35 percent.

Geographic information system. A system of computer hardware, software, data, people, and applications that capture, store, edit, analyze, and display a potentially wide array of geospatial information.

Geophysical exploration. Efforts to locate deposits of oil and gas resources and to better define the subsurface.

Geothermal energy. Natural heat from within the Earth captured for production of electric power, space heating, or industrial steam.

General habitat management area (GHMA). BLM-administered and Forest Service-managed lands requiring special management to sustain GRSG populations. GHMAs are derived from and generally follow the general habitat boundaries (see Chapter 3) but may be modified in extent based on the objectives of each alternative. Likewise, management strategies applied to the GHMAs may vary by alternative.

Goal. A broad statement of a desired outcome; usually not quantifiable and may not have established time frames for achievement.

Grazing relinquishment. The voluntary and permanent surrender by an existing permittee or lessee, (with concurrence of any base property lienholder), of their priority (preference) to use a livestock forage allocation on public land as well as their permission to use this forage. Relinquishments do not require the BLM's consent or approval. The BLM's receipt of a relinquishment is not a decision to close areas to livestock grazing.

Grazing system. Scheduled grazing use and non-use of an allotment to reach identified goals or objectives by improving the quality and quantity of vegetation. It includes developing pastures, utilization levels, grazing rotations, timing and duration of use periods, and necessary range improvements.

Groundwater. Water held underground in soil or permeable rock, often feeding springs and wells.

Guidelines. Actions or management practices that may be used to achieve desired outcomes, sometimes expressed as BMPs. Guidelines may be identified during the land use planning process, but they are not considered a land use plan decision unless the plan specifies that they are mandatory. Guidelines for grazing administration must conform to 43 CFR, Part 4180.2.

Habitat. An environment that meets a specific set of physical, biological, temporal, or spatial characteristics that satisfy the requirements of a plant or animal species or group of species for part or all of their life cycle.

High-voltage transmission line. A transmission line that is greater than or equal to 100 kilovolts.

Impact. The effect, influence, alteration, or imprint caused by an action.

Impairment. The degree to which a distance of clear visibility is degraded by man-made pollutants.

Implementation decisions. Decisions that take action to implement land use planning; generally appealable to Interior Board of Land Appeals under 43 CFR, Part 4.410.

Implementation plan. An area or site-specific plan written to implement decisions made in a land use plan. Includes both activity plans and project plans.

Indicators. Factors that describe resource condition and change and can help the BLM and Forest Service determine trends over time.

Indirect impacts. These result from implementing an action or alternative but usually later in time or removed in distance; they are reasonably certain to occur.

Integrated pest management. A sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks.

Invertebrate. An animal lacking a backbone or spinal column, such as insects, snails, and worms.

Landscape scale. A distinct association of land types that exhibit a unique combination of local climate, landform, topography, geomorphic process, surficial geology, soil, biota, and human influences. Landscapes are generally of a size that the eye can comprehend in a single view.

Land tenure adjustments. Landownership or jurisdictional changes. To improve the manageability of BLM-administered lands and their usefulness to the public, the BLM has numerous authorities for repositioning lands into a more consolidated pattern, disposing of lands, and entering into cooperative management agreements. These land pattern improvements are completed primarily through the use of land exchanges but also through land sales, jurisdictional transfers to other agencies, and the use of cooperative management agreements and leases.

Land use allocation. The identification in a land use plan of the activities and foreseeable development that are allowed, restricted, or excluded for all or part of the planning area, based on desired future conditions (H-1601-I, BLM Land Use Planning Handbook).

Land use authorization. Specific to lands and realty actions, includes those land uses authorized under 43 CFR, Parts 2800 and 2900, which include short- and long-term permits, ROWs, and leases.

Land use plan. A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of land use plan level decisions developed through the planning process outlined in 43 CFR, Part 1600, regardless of the scale

at which the decisions were developed. The term includes both RMPs and management framework plans (from H-1601-I, BLM Land Use Planning Handbook).

Land use plan decision. Establishes desired outcomes and actions needed to achieve them. Decisions are reached using the planning process in 43 CFR, Part 1600. When they are presented to the public as proposed decisions, they can be protested to the BLM Director; however, they are not appealable to Interior Board of Land Appeals.

Large pipeline. One that is 24 inches or greater in diameter.

Late brood-rearing habitat. Used by GRSG following desiccation of herbaceous vegetation in sagebrush uplands (Fischer et al. 1996). Late brood-rearing habitats include mesic sagebrush and mixed shrub communities, wet meadows, and riparian habitats, as well as some agricultural lands, such as alfalfa fields. These habitats are generally used from July to early September but vary annually due to annual weather conditions (Connelly et al. 1988).

Leasable minerals. Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. These include energy-related mineral resources such as oil, natural gas, coal, and geothermal, and some nonenergy minerals, such as phosphate, sodium, potassium, and sulfur. Geothermal resources are also leasable under the Geothermal Steam Act of 1970.

Lease. Section 302 of the Federal Land Policy and Management Act of 1976 provides the BLM's authority to issue leases for the use, occupancy, and development of public lands. Leases are issued for purposes such as a commercial filming, advertising displays, commercial or noncommercial croplands, apiaries, livestock holding or feeding areas not related to grazing permits and leases, native or introduced species harvesting, temporary or permanent facilities for commercial purposes (does not include mining claims), residential occupancy, ski resorts, construction equipment storage sites, assembly yards, oil rig stacking sites, mining claim occupancy if the residential structures are not incidental to the mining operation, and water pipelines and well pumps related to irrigation and non-irrigation facilities. The regulations establishing procedures for processing these leases and permits are found in 43 CFR, Part 2920.

Lease stipulation. A modification of the terms and conditions on a standard lease form at the time of the lease sale.

Lek. A traditional courtship display area attended by male sage-grouse in or next to sagebrush-dominated habitat. A lek is designated based on observations of two or more male sage-grouse engaged in courtship displays. Sub-dominant males may display on itinerant strutting areas during population peaks. Such areas usually fail to become established leks. Therefore, a site where fewer than five males are observed strutting should be confirmed active for two years before meeting the definition of a lek (Connelly et al. 2000; Connelly et al. 2003, 2004). Each state may have a slightly different definition of lek, active lek, inactive lek, occupied lek, and unoccupied leks. Regional planning will use the appropriate definition provided by the state of interest.

- **Abandoned lek.** A lek in otherwise suitable habitat that has not been active for 10 consecutive years. To be designated abandoned, a lek must be "inactive" (see above criteria) in at least four non-consecutive strutting seasons spanning the 10 years. The site of an

- abandoned lek should be surveyed at least once every 10 years to determine whether it has been reoccupied.
- **Active lek.** Any lek that has been attended by two or more males at least twice in the last five years.
 - **Destroyed lek.** A formerly active lek site and surrounding sagebrush habitat that has been destroyed and is no longer suitable for GRSG breeding.
 - **Historic lek.** Any lek that has been attended by 0 or 1 male during every visit (minimum five visits) in the last 30 years.
 - **Inactive lek.** Any lek where sufficient data suggests that there has been 0 or 1 male during every visit (minimum two visits) in the last five years.
 - **Occupied lek.** A lek that has been active during at least one strutting season within the prior 10 years.
 - **Pending active lek.** Any lek that has been attended by two or more males only once in the last five years.
 - **Unoccupied lek.** A lek that has either been destroyed or abandoned.

Lek complex. A lek or group of leks within 1.5 miles of each other between which male GRSG may interchange from one day to the next. Fidelity to leks has been well documented. Visits to multiple leks are most common among yearlings and less frequent for adult males, suggesting an age-related period of establishment (Connelly et al. 2004).

Lentic. Pertaining to standing water, such as lakes and ponds.

Limited area. An area restricted at certain times, in certain areas, or to certain vehicular use. These restrictions may be of any type but can generally be accommodated within the following type of categories: numbers of vehicles, types of vehicles, time or season of vehicle use, permitted or licensed use only, use on existing roads and trails, use on designated roads and trails, and other restrictions (43 CFR, Part 8340.0-5[g]).

Locatable minerals. Minerals subject to exploration, development, and disposal by staking mining claims, as authorized by the Mining Act of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

Long-term effect. This could occur for an extended period after implementation of the alternative. The effect could last several years or more.

Lotic. Pertaining to moving water, such as streams or rivers.

Management decision. A decision made by the BLM to manage public lands. Management decisions include both land use plan decisions and implementation decisions.

Master development plan. A set of information common to multiple planned wells, including drilling plans, surface use plans of operations, and plans for future production.

Mechanized transport. Any vehicle, device, or contrivance for moving people or material in or over land, water, snow, or air that has moving parts.

Mesic (shrub condition). Sites with mean annual precipitation of greater than or equal to 10 inches.

Mineral. Any naturally formed inorganic material, solid, or fluid inorganic substance that can be extracted from the earth; any of various naturally occurring homogeneous substances (as stone, coal, salt, sulfur, sand, petroleum, water, or natural gas) obtained usually from the ground. Under federal laws, considered as locatable (subject to the general mining laws), leasable (subject to the Mineral Leasing Act of 1920), and salable (subject to the Materials Act of 1947).

Mineral entry. The filing of a claim on public land to obtain the right to any locatable minerals it may contain.

Mineral estate. The ownership of minerals, including rights necessary for access, exploration, development, mining, ore dressing, and transportation operations.

Mineral materials. Common varieties of mineral materials, such as soil, sand and gravel, stone, pumice, pumicite, and clay, that are not obtainable under the mining or leasing laws but that can be acquired under the Materials Act of 1947, as amended.

Minimization mitigation. Minimizing impacts by limiting the degree or magnitude of the action and its implementation (40 CFR, Part 1508.20 [b]).

Mining claim. A parcel of land that a miner takes and holds for mining purposes, having acquired the right of possession by complying with the Mining Law and local laws and rules. A mining claim may contain as many adjoining locations as the locator may make or buy. There are four categories of mining claims: lode, placer, mill site, and tunnel site.

Mining Law of 1872. Provides for claiming and gaining title to locatable minerals on public lands. Also referred to as the General Mining Laws or Mining Laws.

Mitigation. Includes specific means, measures, or practices that could reduce, avoid, or eliminate adverse impacts. Mitigation can include avoiding the impact altogether by not taking a certain action or parts of an action, minimizing the impact by limiting the degree of magnitude of the action and its implementation, rectifying the impact by repairing, rehabilitation, or restoring the affected environment, reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action, and compensating for the impact by replacing or providing substitute resources or environments.

Modification. A fundamental change to the provisions of a lease stipulation, either temporarily or for the term of the lease. A modification may include an exemption from or alteration of a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria applied.

Monitoring (plan monitoring). The process of tracking the implementation of land use plan decisions and collecting and assessing data necessary to evaluate the effectiveness of land use planning decisions.

Motorized vehicles or uses. Vehicles that are motorized, including jeeps, all-terrain vehicles (such as four-wheelers and three-wheelers), trail motorcycles or dirt bikes, and aircraft.

Multiple-use. The management of the public lands and their various resource values so that they are used in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output (FLPMA; BLM Manual 6840, Special Status Species Manual).

National Conservation Area. Area designated by Congress, generally to conserve, protect, enhance, and properly manage the resources and values for which it was designated for the benefit and enjoyment of present and future generations (BLM Manual 6220).

National Environmental Policy Act of 1969 (NEPA). Public Law 91-190. Establishes environmental policy for the nation. Among other things, NEPA requires federal agencies to consider environmental values in decision-making.

National Historic Trail. A congressionally designated, extended, long-distance trail, not necessarily managed as continuous, that follows as closely as possible and practicable the original trails or routes of travel of national historic significance. The purpose of a National Historic Trail is the identification and protection of the historic route and the historic remnants and artifacts for public use and enjoyment. A National Historic Trail is managed to protect the nationally significant resources, qualities, values, and associated settings of the areas through which such trails may pass, including the primary use or uses of the trail (BLM Manual 6250, NHT Administration).

Native vegetation. Plant species that were found here before Euro-American contact and consequently are in balance with these ecosystems because they have well developed parasites, predators, and pollinators.

Natural processes. Fire, drought, insect and disease outbreaks, flooding, and other events that existed prior to Euro-American contact and shaped vegetation composition and structure.

Net conservation gain. The actual benefit or gain above baseline conditions.

No longer in use. Prior authorizations containing antiquated infrastructure no longer being used by ROW or leaseholders; expired ROWs, 2900 permits and Recreation and Public Purpose lease cases; or other previously approved uses that no longer have authorizations.

Nonenergy leasable minerals. Those minerals or materials designated as leasable under the Mineral Leasing Act of 1920. Nonenergy minerals include resources such as phosphate, sodium, potassium, and sulfur.

Nonhabitat. Areas outside of mapped GRSG habitats (PHMA, GHMA, and OHMA) that do not contain suitable habitat for GRSG life-history requirements.

Nonhabitat (Nevada State Plan). Areas identified through the habitat suitability index (Section 6.0) with index values less than 1.5 standard deviations below the mean value of the index. These areas are identified as generally not meeting the needs for GRSG to survive and reproduce.

Nonstructural range improvement. Range improvements that include seedings, vegetation treatments, herbicide application, and prescribed fire.

Nonfunctional condition. Riparian-wetland areas that clearly are not providing adequate vegetation, landform, or woody debris to dissipate energies associated with flow events and thus are not reducing erosion and improving water quality.

No surface occupancy (NSO). A major constraint where use or occupancy of the land surface for fluid mineral exploration or development and all activities associated with fluid mineral leasing, such as truck-mounted drilling and geophysical exploration equipment off designated routes and construction of wells or pads, are prohibited to protect identified resource values. Areas identified as NSO are open to fluid mineral leasing, but surface occupancy or surface-disturbing activities associated with fluid mineral leasing cannot be conducted on the surface of the land. Access to fluid mineral deposits would require horizontal drilling from outside the boundaries of the NSO area.

Noxious weeds. A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or nonnative, new, or not common to the United States.

Objective (BLM). A description of a desired outcome for a resource. Objectives can be quantified and measured and, where possible, have established time frames for achievement.

Off-highway vehicle (OHV; off-road vehicle). Any motorized vehicle capable of or designated for travel on or immediately over land, water, or other natural terrain. The term excludes any nonamphibious registered motorboat; any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; any vehicle whose use is expressly authorized by the BLM Authorized Officer or otherwise officially approved; vehicles in official use; and any combat or combat support vehicle when used for national defense emergencies (43 CFR, Part 8340.0-5).

OHV area plan decision. Routes within PHMA would be limited to existing roads, primitive roads, and trails. The OHV designation would change from “limited to existing roads, primitive roads, and

trails” to “limited to designated roads, primitive, roads, and trails” upon the completion of travel management plans.

Open. Generally denotes an area that is available for a particular use or uses. Refers to specific program definitions found in law, regulations, or policy guidance for application to individual programs. For example, 43 CFR, Part 8340.0-5, defines the specific meaning of open as it relates to OHV use.

Permitted use. The forage allocated by or under the guidance of an applicable land use plan for livestock grazing in an allotment under a permit or lease and expressed in AUMs (43 CFR, Part 4100.0-5; from H-4180-1, BLM Rangeland Health Standards Manual).

Permittee. A person or company permitted to graze livestock on public land.

Phase I conifer encroachment. Trees are present on the site, but the shrub and herb layer are the dominant influence on ecological processes (hydrologic, nutrient, and energy cycles). A tree canopy cover of less than 10 percent (Miller et al. 2005).

Phase II conifer encroachment. Trees are co-dominant with shrub and herb layers. All three layers influence ecological processes. Tree canopy cover of 10 to 30 percent (Miller et al. 2005).

Phase III conifer encroachment. Trees are the dominant vegetation and the primary layer influencing ecological processes. Tree canopy cover of greater than 30 percent (Miller et al. 2005).

Plan of operations. This is required for all mining activity exploration greater than five acres or surface disturbance greater than casual use on certain special category lands. Special category lands are described under 43 CFR, Part 3809.11(c), and include such lands as designated Areas of Critical Environmental Concern, lands within the National Wilderness Preservation System, and areas closed to off-road vehicles, among others. In addition, a plan of operations is required for activity greater than casual use on lands patented under the Stock Raising Homestead Act with federal minerals where the operator does not have the written consent of the surface owner (43 CFR, Part 3814). The plan of operations needs to be filed in the BLM field office with jurisdiction over the land involved. It does not need to be on a particular form but must address the information required by 43 CFR, Part 3809.401(b).

Planning area. The geographical area for which resource management plans are developed and maintained. The Nevada and Northeastern California Greater Sage-Grouse RMPA/EIS planning area boundary includes public lands managed by the United States Department of the Interior, Bureau of Land Management, within five BLM Districts in Nevada (Battle Mountain, Carson City, Elko, Ely, and Winnemucca) and three BLM Field Offices in California (Alturas, Eagle Lake, and Surprise).

Planning criteria. The standards, rules, and other factors developed by managers and interdisciplinary teams for their use in forming judgments about decision-making, analysis, and data collection during planning. Planning criteria streamlines and simplifies the resource management planning actions.

Policy. This is a statement of guiding principles, or procedures, designed and intended to influence planning decisions, operating actions, or other affairs of the BLM. Policies are established interpretations of legislation, executive orders, regulations, or other presidential, secretarial, or management directives.

Population management unit. GRSG areas delineated based on aggregations of GRSG lek locations where the potential for genetic interchange (short-term) among populations is high.

Prescribed fire. Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist and NEPA requirements, where applicable, must be met before ignition.

Primitive road. A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not customarily meet any BLM road design standards.

Primitive route. Any transportation linear feature in areas that have been identified as having wilderness characteristics and not meeting the wilderness inventory road definition (BLM Manual 6310 – Conducting Wilderness Characteristics Inventory on BLM Lands).

Priority habitat management area (PHMA). BLM-administered and Forest Service-managed lands identified as having the highest value to maintaining sustainable GRSG populations. PHMAs are derived from and generally follow the priority habitat boundaries (see in Chapter 3) but may be modified in extent based on the objectives of each alternative. Likewise, management strategies applied to the PHMAs may vary by alternative.

Prohibit. To forbid something by law, rule, or other authority; no authorizations will be issued.

Restrict. To put a limit on; keep under control; to limit someone's actions or movement, or to limit the amount or size of something.

Project area. The Nevada and Northeastern California Greater Sage-Grouse RMPA/EIS planning area boundary includes public lands managed by the BLM, within the five BLM districts in Nevada (Battle Mountain, Carson City, Elko, Ely, and Winnemucca) and three BLM Field Offices in California (Alturas, Eagle Lake, and Surprise), as well as public lands managed by the Forest Service, Humboldt-Toiyabe National Forest.

Proper functioning condition. A term describing stream health that is based on the presence of adequate vegetation, landform, and debris to dissipate energy, reduce erosion and improve water quality.

Public domain. The term applied to any or all of those areas of land ceded to the federal government by the original states and to such other lands as were later acquired by treaty, purchase, or cession and are disposed of only under the authority of Congress.

Public land. Land or interest in land owned by the United States and administered by the Secretary of the Interior through the BLM without regard to how the United States acquired ownership, except lands on the Outer Continental Shelf and land held for the benefit of Indians, Aleuts, and Eskimos (H-1601-I, BLM Land Use Planning Handbook).

Range improvement. Any activity, structure, or program on or relating to rangelands that is designed to improve production of forage, change vegetative composition, control patterns of use, provide water,

stabilize soil and water conditions, and provide habitat for livestock and wildlife. The term includes structures, treatment projects, and use of mechanical means to accomplish the desired results.

Range improvement project. An authorized physical modification or treatment that is designed to improve production of forage, change vegetation composition, control patterns of use, provide water, stabilize soil and water conditions, restore, protect, and improve the condition of rangeland ecosystems to benefit livestock, wild horses, and burros and fish and wildlife. This definition includes structures, treatment projects and use of mechanical devices, or modifications achieved through mechanical means.

Raptor. A bird of prey with sharp talons and a strongly curved beak, such as hawks, owls, falcons, and eagles.

Reasonably foreseeable development scenario (RFD). The prediction of the type and amount of oil and gas activity that would occur in a given area. The prediction is based on geologic factors, past history of drilling, projected demand for oil and gas, and industry interest.

Reclamation. The suite of actions taken within an area affected by human disturbance, the outcome of which is intended to change the condition of the disturbed area to meet predetermined objectives or to make it acceptable for certain defined resources, such as wildlife habitat, grazing, or ecosystem function.

Rehabilitate. Returning disturbed lands as near to predisturbed condition as is reasonably practical or as specified in approved permits.

Rehabilitation. Efforts undertaken within three years of containment of a wildland fire to repair or improve fire-damaged lands unlikely to recover naturally to management approved conditions, or to repair or replace minor facilities damaged by fire.

Renewable energy. Energy resources that constantly renew themselves or that are regarded as practically inexhaustible. These include solar, wind, geothermal, hydro, and biomass. Although particular geothermal formations can be depleted, the natural heat in the Earth is a virtually inexhaustible reserve of potential energy.

Required design features. Means, measures, or practices intended to reduce or avoid adverse environmental impacts; a suite of features that would establish the minimum specifications for certain activities (i.e., water developments, mineral development, and fire and fuels management) and mitigate adverse impacts. These design features would be required to provide a greater level of regulatory certainty than through implementing BMPs. In general, the design features are accepted practices that are known to be effective when implemented properly at the project level. However, their applicability and overall effectiveness cannot be fully assessed except at the project-specific level when the project location and design are known. Because of site-specific circumstances, some features may not apply to some projects, such as when a resource is not present on a given site or may require slight variations from what is described in the LUPA/EIS, such as a larger or smaller protective area. All variations in design features would require appropriate analysis and disclosure as part of future project authorizations. Additional mitigation measures may be identified and required during individual project development and environmental review.

Reserve common allotment. An area that is designated in the land use plan as available for livestock grazing but reserved as an alternative to grazing in another allotment in order to facilitate rangeland restoration treatments and recovery from natural disturbances, such as drought or wildfire. The reserve common allotment would provide needed flexibility that would help an agency apply temporary rest from grazing where vegetation treatments or management would be most effective.

Residual impacts. Impacts from an authorized land use that remain after applying avoidance and minimization mitigation; also referred to as unavoidable impacts.

Resilience. The capacity of an ecosystem to regain its fundamental structure, processes, and functioning when subjected to stressors or disturbances such as drought, livestock grazing, or wildfire. In this context, resilience is a function of the underlying ecosystem attributes and processes that determine ecosystem recovery rather than the amount or magnitude of stress or disturbance that an ecosystem can withstand before changes in attributes and processes result in new alternative states.

Resistance. The capacity of an ecosystem to retain its fundamental structure, processes, and functioning (or remain largely unchanged) despite stressors or disturbances.

Resistance to invasives. The abiotic and biotic attributes and ecological processes of an ecosystem that limit the population growth of an invading species.

Resource management plan. A land use plan as prescribed by the Federal Land Policy and Management Act that establishes, for a given area of land, land use allocations, coordination guidelines for multiple-use, objectives, and actions to be achieved.

Restore/restoration. Implementation of passive or active management actions designed to increase or maintain perennial herbaceous species and landscape cover of sagebrush so that plant communities are more resilient to disturbance and invasive species over the long term. The long-term goal is to create functional, high quality habitat that is occupied by sage-grouse. A short-term goal may be to restore the landform, soils, and hydrology and to increase the percentage of preferred vegetation, seeding of desired species, or treatment of undesired species.

Restriction/restricted use. A limitation or constraint on public land uses and operations. Restrictions can be of any kind, but most commonly apply to certain types of vehicle use, temporal or spatial constraints, or certain authorizations.

Revegetate/revegetation. The process of putting vegetation back in an area where it previously existed, which may or may not simulate natural conditions.

Revision. The process of completely rewriting the land use plan due to changes in the planning area affecting major portions of the plan or the entire plan.

Right-of-way (ROW). An authorization to use a specific piece of public land for a certain project, such as roads, pipelines, transmission lines, or communication sites. A ROW grant authorizes rights and privileges for a specific use of the land for a specific period. Other land use authorizations, such as easements, leases, permits, or licenses, are also categorized under ROWs for this document.

Major ROW. A ROW that includes high voltage transmission lines (above 100 kilovolts) or major pipelines (greater than 24 inches).

Minor ROW. A ROW that includes transmission lines below 100 kilovolts or pipelines less than 24 inches in diameter. This also includes leases and permit authorizations covered under the lands and realty program.

Right-of-way avoidance area. An area identified through resource management planning to be avoided but may be available for ROW, lease, and permit location with special stipulations.

Right-of-way exclusion area. An area identified through resource management planning that is not available for ROW, lease, and permit location under any conditions.

Riparian area. A form of wetland transition between permanently saturated wetlands and upland areas. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas are lands along perennially and intermittently flowing rivers and streams, glacial potholes, and the shores of lakes and reservoirs with stable water levels. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

Riparian zone. An area one-quarter-mile wide encompassing riparian and adjacent vegetation.

Road. A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels and maintained for regular and continuous use.

Rotation. Grazing rotation between pastures in the allotment for the permitted time.

Routes. Multiple roads, trails, and primitive roads; a group or set of roads, trails, and primitive roads that represents less than 100 percent of the BLM transportation system. Generically, components of the transportation system are described as routes.

Sagebrush focal areas. Areas identified by the USFWS that represent recognized strongholds for GRSG that have been noted and referenced by the conservation community as having the highest densities of GRSG and other criteria important for the persistence of GRSG.

Sale (public land). A method of land disposal, pursuant to Section 203 of FLPMA, whereby the federal government receives a fair-market payment for the transfer of land from federal ownership. Public lands determined suitable for sale are offered on the initiative of the BLM. Lands suitable for sale must be identified in the RMP. Any lands to be disposed of by sale that are not identified in the current RMP, or that meet the disposal criteria identified in the RMP, require a plan amendment before a sale can occur.

Saturated soils. Occur when the infiltration capacity of the soil is exceeded from above due to rainfall or snowmelt runoff. Soils can also become saturated from groundwater inputs.

Season of use. The time during which livestock grazing is permitted on a given range area, as specified in the grazing lease.

Seeding. A vegetation treatment that includes the application of grass, forb, or shrub seed, either aerially or from the ground. In areas of gentle terrain, ground applications of seed are often

accomplished with a rangeland drill. Seeding allows the establishment of native species or placeholder species and restoration of disturbed areas to a perennial-dominated cover type, thereby decreasing the risk of subsequent invasion by exotic plant species. Seeding would be used primarily as a follow-up treatment in areas where disturbance or the previously described treatments have removed exotic plant species and their residue.

Short-term effect. Occurs only during or immediately after implementation of an alternative.

Special status species. BLM special status species are those listed, candidate, or proposed for listing under the Endangered Species Act and those requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the Endangered Species Act that are designated as sensitive by a BLM State Director. All federally listed candidate species, proposed species, and delisted species in the five years following delisting are conserved as BLM sensitive species. Forest Service special status species are federally listed threatened and endangered species, designated by the USFWS under the ESA, sensitive species, designated by the Regional Forester with each Forest Service region, and management indicator species, designated for each forest unit within the individual forest and grassland plans during the planning process.

Split-estate. This is the circumstance where the surface of a particular parcel of land is owned by a different party than the minerals underlying the surface. Split-estates may have any combination of surface/subsurface owners: federal/state, federal/private, state/private, or percentage ownerships. When referring to the split-estate ownership on a particular parcel of land, it is generally necessary to describe the surface/subsurface ownership pattern of the parcel.

Stabilize. The process of stopping further damage from occurring.

Standard. A description of the physical and biological conditions or degree of function required for healthy sustainable lands, such as land health standards. To be expressed as a desired outcome (goal).

Standard lease terms and conditions. Areas may be open to leasing with no specific management decisions defined in a resource management plan; however, these areas are subject to lease terms and conditions, as defined on the lease form (Form 3100-11, Offer to Lease and Lease for Oil and Gas; and Form 3200-24, Offer to Lease and Lease for Geothermal Resources).

State. Comprised of an integrated soil and vegetation unit having one or more biological communities that occur on a particular ecological site and that are functionally similar with respect to the three attributes (soil/site stability, hydrologic function, and biotic integrity) under natural disturbance regimes.

Strongholds. Areas having the highest densities of GRSG populations and other habitat criteria important for their persistence (USFWS 2014).

Stipulation (general). A term, condition, or requirement that is specified in an agreement or contract.

Stipulation (oil and gas). A provision that modifies standard oil and gas lease terms and conditions in order to protect other resource values or land uses and is attached to and made a part of the lease.

Typical lease stipulations include no surface occupancy (NSO), timing limitations (TL), and controlled surface use (CSU). Lease stipulations are developed through the land use planning (RMP) process.

Suitable river. An eligible river segment found through administrative study to meet the criteria for designation as a component of the National Wild and Scenic Rivers System, as specified in Section 4(a) of the Wild and Scenic Rivers Act (BLM Manual 6400, Wild and Scenic Rivers).

Surface-disturbing activities. An action that alters the vegetation, surface/near-surface soil resources, or surface geologic features, beyond natural site conditions and on a scale that affects other public land values. Examples of surface-disturbing activities are operation of heavy equipment to construct well pads, roads, pits, and reservoirs; installation of pipelines and power lines; and implementing several types of vegetation treatments, such as prescribed fire. Surface-disturbing activities may be either authorized or prohibited.

Surface uses. These are all the various activities that may be present on the surface or near-surface, such as pipelines, of the public lands. It does not refer to those subterranean activities, such as underground mining, occurring on the public lands or federal mineral estate. When administered as a use restriction, such as no surface use, this phrase prohibits all but specified resource uses and activities in a certain area to protect particular sensitive resource values and property. This designation typically applies to small acreage sensitive resource sites, such as plant community study enclosure, or administrative sites, such as government ware-yard, where only authorized agency personnel are admitted.

Sustained yield. The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple uses.

Technically feasible. Actions that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant. It is the BLM's and Forest Service's sole responsibility to determine what actions are technically and economically feasible. The BLM and the Forest Service will consider whether implementation of the proposed action is likely given past and current practice and technology; this consideration does not necessarily require a cost-benefit analysis or speculation about an applicant's costs and profit (Modified from the CEQ's 40 Most Asked Questions).

Temporary/temporary use. A relative term that must be considered in the context of the resource values affected and the nature of the resource uses/activities taking place. Generally, a temporary activity is considered to be one that is not fixed in place and is of short duration.

Terrestrial. Living or growing in or on the land.

Threatened species. Any species that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Under the Endangered Species Act, threatened is the lesser protected of the two categories, threatened and endangered. It is determined by the USFWS as directed by the Endangered Species Act (16 USC, Sections 1531-1544).

Timber. Standing trees, downed trees, or logs that are capable of being measured in board feet.

Timeliness. The conservation benefits from compensatory mitigation accruing as early as possible or before impacts have begun.

Timing limitation (TL). The TL stipulation, a moderate constraint, is applicable to fluid mineral leasing, all activities associated with fluid mineral leasing, such as truck-mounted drilling and geophysical exploration equipment off designated routes, construction of wells or pads, and other surface-disturbing activities (i.e., those not related to fluid mineral leasing). Areas identified for TL are closed to fluid mineral exploration and development, surface-disturbing activities, and intensive human activity during identified time frames. This stipulation does not apply to operation and basic maintenance activities, including associated vehicle travel, unless otherwise specified. Construction, drilling, completions, and other operations considered to be intensive are not allowed. Intensive maintenance, such as work overs on wells, is not permitted. TLs can overlap spatially with NSO and CSU, as well as with areas that have no other restrictions.

Trail. A linear route managed for human power, such as hiking or bicycling, stock (such as equestrian), or off-highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

Transfer of grazing preference. The BLM's approval of an application to transfer grazing preference from one party to another or from one base property to another, or both. Grazing preference means a superior or priority position against others for the purposes of receiving a grazing permit or lease. This priority is attached to base property owned or controlled by the permittee or lessee.

Transition. A shift between two states. Transitions are not reversible by simply altering the intensity or direction of factors that produced the change. Instead, they require new inputs, such as revegetation or shrub removal. Practices such as these that accelerate succession are often expensive to apply.

Transmission. The movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers or is delivered to other electric systems. Transmission is considered to end when the energy is transformed for distribution to the consumer.

Transmission line. An electrical utility line with a capacity greater than or equal to 100 kilovolts or a natural gas, hydrogen, or water pipeline greater than or equal to 24 inches in diameter.

Transportation system. The sum of the BLM's recognized inventory of linear features (roads, primitive roads, and trails) formally recognized, designated, and approved as part of the BLM's transportation system.

Tribal interests. Native American or Native Alaskan economic rights such as Indian trust assets, resource uses, and access guaranteed by treaty rights and subsistence uses.

Understory. That portion of a plant community growing underneath the taller plants on the site.

Utility corridor. A designated parcel of land that is either linear or areal in character. Utility corridors are not usually wider than five miles, are limited by technological, environmental, and topographical factors, and are set in width as identified by the special use permit or right-of-way issued. Designation

criteria are set forth in Section 503 of FLPMA for special use permits and rights-of-way and 43 CFR, Part 2802.11, for rights-of-way.

Utility-scale. An electrical generation facility capable of producing 20 megawatts or more of electricity.

Valid existing rights. Documented legal rights or interests in the land that allow a person or entity to use said land for a specific purpose and that are still in effect. Such rights include fee title ownership, mineral rights, rights-of-way, easements, permits, and licenses. Such rights may have been reserved, acquired, leased, granted, permitted, or otherwise authorized over time.

Vegetation manipulation. Planned alteration of vegetation communities through use of mechanical, chemical, seeding, or prescribed fire or managed fire to achieve desired resource objectives.

Vegetation treatments. Management practices that change the vegetation structure to a different stage of development. Vegetation treatment methods include managed fire, prescribed fire, chemical, mechanical, and seeding.

Vegetation type. A plant community with immediately distinguishable characteristics based on and named after the apparent dominant plant species.

WAFWA management zone. Delineation of GRSG management zones that were determined by GRSG populations and subpopulations identified within seven floristic provinces (Connelly et al. 2004). Floristic provinces reflect ecological and biological issues and similarities, not political boundaries. WAFWA management zones will be used to identify and address cross-state issues, such as regional mitigation and adaptive management monitoring response, through WAFWA Management Zone GRSG Conservation Teams (Teams). These Teams will convene and respond to issues at the appropriate scale, and will utilize existing coordination and management structures to the extent possible.

Warranted but precluded. When the public files a petition with the USFWS to have a species listed under the Endangered Species Act, the USFWS can make one of three findings: listing is warranted, listing is not warranted, or listing is warranted but precluded. The warranted by precluded listing indicates that a species should be listed based on the available science, but listing other species takes priority because they are more in need of protection.

Watershed. Topographical region or area delineated by water draining to a particular watercourse or body of water.

West Nile virus. A virus that is found in temperate and tropical regions of the world and most commonly transmitted by mosquitos. West Nile virus can cause flu-like symptoms in humans and can be lethal to birds, including GRSG.

Wilderness. A congressionally designated area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, that is protected and managed to preserve its natural conditions and that (1) generally appears to have been affected mainly by the forces of nature, with human imprints substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres or is large enough to make practical its preservation and use in an unimpaired condition; and (4) may

also contain ecological, geological, or other features of scientific, educational, scenic, or historic value. The definition is contained in Section 2(c) of the Wilderness Act of 1964 (78 Stat. 891).

Wilderness characteristics. Wilderness characteristics include the area's size, its apparent naturalness, and outstanding opportunities for solitude or a primitive and unconfined type of recreation. They may also include supplemental values. Lands with wilderness characteristics are those that the BLM has inventoried and determined to contain wilderness characteristics, as defined in Section 2(c) of the Wilderness Act.

Wilderness Study Area. A designation made through the land use planning process of a roadless area found to have wilderness characteristics, as described in Section 2(c) of the Wilderness Act of 1964.

Wildfires. Unplanned ignitions or prescribed fires that are declared wildfires. Wildfires may be managed to meet one or more objectives as specified in the resource management plan, and these objectives can change as the fire spreads across the landscape (NWCG #024-2010 Memorandum, April 30, 2010).

Wildland fire. Wildland fire is a general term describing any non-structure fire that occurs in the wildland. Wildland fires are categorized into three distinct types, as follows:

- Wildfires—Unplanned ignitions or prescribed fires that are declared wildfires
- Prescribed fires—Planned ignitions
- Uncharacteristic wildfire—Fire processes occurring outside their historical natural fire regime

Wildfire suppression. An appropriate management response to wildfire, escaped wildland fire use, or prescribed fire that curtails fire spread and eliminates all identified threats from the particular fire.

Withdrawal. An action that restricts the use of public land and segregates the land from the operation of some or all of the public land and mineral laws. Withdrawals are also used to transfer jurisdiction of management of public lands to other federal agencies.

Winter concentration areas. Sage-grouse winter habitats which are occupied annually and provide sufficient sagebrush cover and food to support birds throughout the entire winter (especially periods with above average snow cover). Many of these areas support several different breeding populations of sage-grouse. Sage-grouse typically show high fidelity for these areas, and loss or fragmentation can result in significant population impacts.

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CHAPTER 6

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